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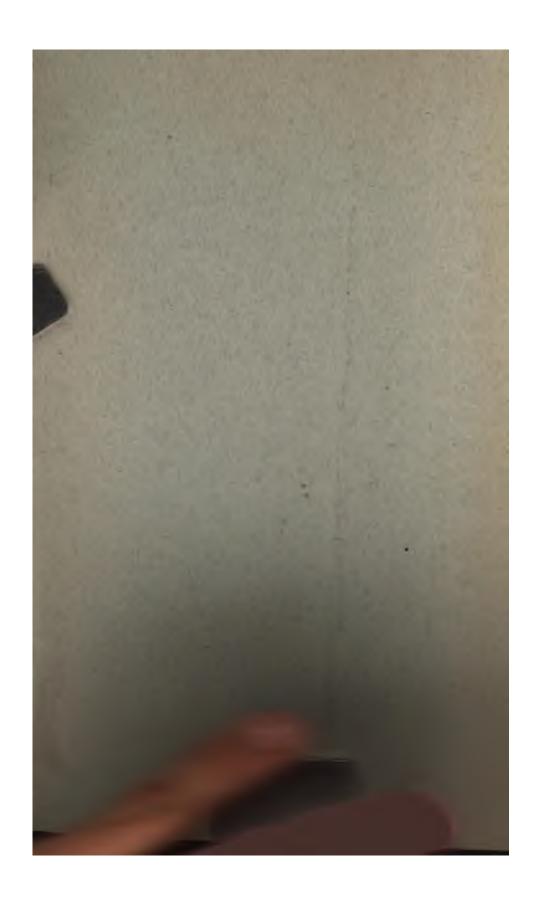
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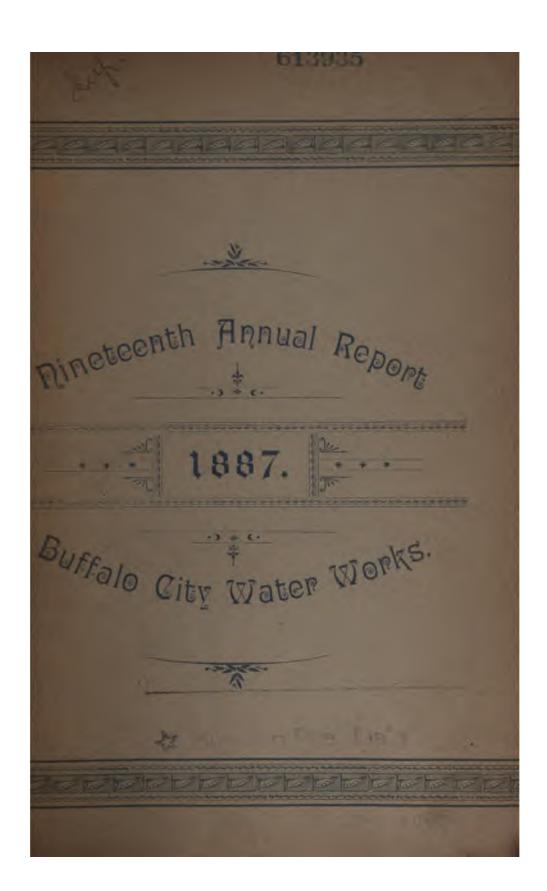




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NINETEENTH

ANNUAL REPORT

OF THE

Buffalo City Water Works

BUFFALO,-NEW YORK.

FOR

THE YEAR 1887.

JNO. LAUGHLIN & Co., Printers.

1888.

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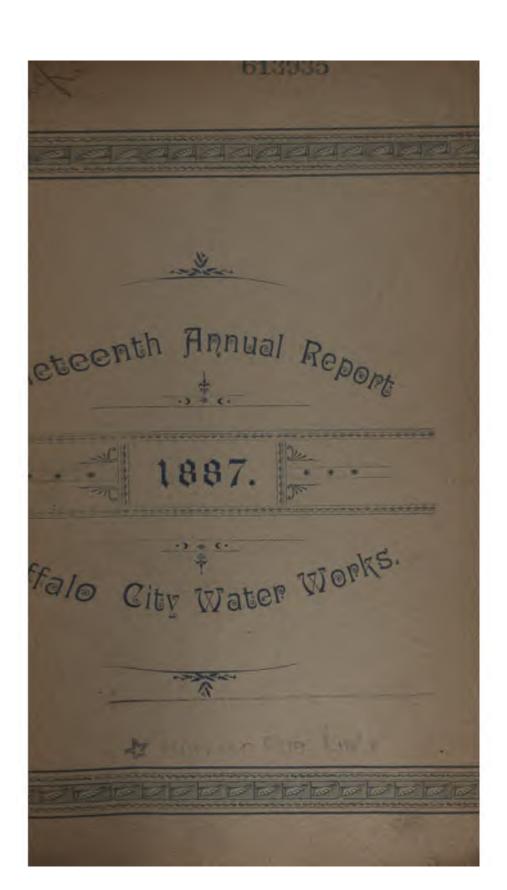
Board of Water Commissioners,
LOUIS P. REICHERT, Chairman.
JAMES RYAN, Secretary.
S. K. WORTHINGTON.

Superintendent and Engineer, LOUIS H. KNAPP.

Registrar,
JOHN T. REES.

Chief Engineer of Steam-Power,
PATRICK BRENNAN.

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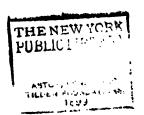
S. K. WORTHINGTON.

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Registrar,

JOHN T. REES.

Chief Engineer of Steam-Power,
PATRICK BRENNAN. . .



Commissioners' Report.

To the Honorable Common Council of the City of Buffalo:

GENTLEMEN — In compliance with the requirements of the Charter, we have the honor to present herewith the nineteenth annual report of the Buffalo City Water Works.

In presentation of this report, we have the satisfaction of stating that the Department, in all its branches, is in the best of order, the engines, boilers and buildings being in thorough repair.

The pipe laying, as now done under the immediate direction of this Board, instead of by contract, is a great improvement, the work being done in a more efficient and workmanlike manner, and great care taken in replacing the pavement.

No accident has occurred during the year, and no interruption to the water supply has taken place.

REVENUE.

The total receipts of the Water Department for water,	
etc., was	\$477,870.25
by order of Council	1,458.38
	\$476,411.87

There was, in addition to the above-named amount, \$11,927.24 of 1886 frontage tax rebated at the water office during the first part of the year. The receipts for the year, placed upon its own

basis, would have shown a total of \$488,339.11, or an increase over the previous year, of \$11,129.54.

The total requirements of the Department, for 1887, were: Interest on bonds \$166,741.74 Maintenance and repairs, including coal . \$127,065.25 Less coal on hand January 1, 1888 . . . 27,065.25 100,000.00 Extensions and improvements \$209,542.10 Less lead, hydrants and connections on hand January 1st10,000.00 199,542.10 \$466,283.84 Total revenue for water, etc., being full cash receipt at . 476,411.87

The above exhibit shows that the revenue of the Department met its running expenses, and provided \$349,346.62 to the city, to be used for the purpose of paying interest on funded debt and extending the water system. And we feel the showing is good enough to warrant us in recommending a reduction in rates, to domestic consumers, of ten to fifteen per cent., as shown by revised table of rates herewith presented, viz.:

\$10,128.03

DWELLINGS.

Stories in Height.						
I	1 1/2	2	2 1/2	3	4	5
\$4.00	\$5.00	\$ 6.00	\$7.00	\$8.00	\$9.00	\$10.00
5.00	6.00	7.00	8.00	9.00	10.00	11.00
6.00	7.00	8.00	9.00	10.00	11.00	12.00
7.00	8.00	9.00	10.00	11.00	I 2.00	13.00
8.00	9.00	10.00	11.00	I 2.00	13.00	14.00
9.00	10.00	11.00	I 2.00	13.00	14.00	15. 0 0
	\$4.00 5.00 6.00 7.00 8.00	\$4.00 \$5.00 5.00 6.00 6.00 7.00 7.00 8.00 8.00 9.00	I I½ 2 \$4.00 \$5.00 \$6.00 5.00 6.00 7.00 6.00 7.00 8.00 7.00 8.00 9.00 8.00 9.00 10.00	I 1½ 2 2½ \$4.00 \$5.00 \$6.00 \$7.00 5.00 6.00 7.00 8.00 6.00 7.00 8.00 9.00 7.00 8.00 9.00 10.00 8.00 9.00 10.00 11.00	I 1½ 2 2½ 3 \$4.00 \$5.00 \$6.00 \$7.00 \$8.00 5.00 6.00 7.00 8.00 9.00 6.00 7.00 8.00 9.00 10.00 7.00 8.00 9.00 11.00 12.00	Stories in Height.

MISCELLANEOUS OR EXTRA RATES.

Dwellings occupied by more than one family, \$4.00 each family. Bathing-tubs, private houses, \$2.00 each.

With the proposed reduction, rates to domestic consumers have been reduced on an average of fifty per cent. during the term of the present Commissioners, and while it is a source of just pride with us to receive a large revenue for water, we are confident that the reduction as now recommended will not materially reduce it below what it was during the past year. The low charge made for water will greatly increase the number of new consumers, and stimulate the introduction of bath-tubs, etc., for use in private houses.

If same meet with your approval, we would recommend that Section No. 74 of Ordinances, "Table of Annual Rates," as now established, be amended to read as above.

The expense account of the year, as shown, includes the purchase of 17,780 tons of coal, the purchase price being very advantageous to the Department. We have an unusually large quantity on hand at the beginning of the year, which will apply on next year's account, and correspondingly reduce same. We are obliged to receive our full supply during season of canal navigation.

NEW PUMPING ENGINE.

In conformity with our recommendation made to your Honorable Body in February last, same being sanctioned by you, we have entered into contract with the Holly Manufacturing Company, of Lockport, N. Y., for a 20,000,000-gallon Gaskill

engine, four boilers, and foundation for the engine, for the sum of \$94,750. This engine will be located at the lower pumping station. The necessary construction of wells, conduits, etc., has been successfully completed.

The large yearly increase in consumption and rapid extension of pipe laying made imperative, for the future supply, the purchase of this additional pumping machinery. We expect to have the engine completed and running during the coming year.

WATER PIPES.

There were laid, during the year, twenty-one miles 2,795 feet of water pipe of various sizes, as follows, viz.:

•														-	_	
feet.	383							٠.								2-inch
feet.	300					•.										3-inch
feet.	8,937						•		٠.							4-inch
feet.	64,538															6-inch
feet.	7															8-inch
feet.	25,191															o-inch
feet.	3,907															2-inch
feet.	6,053											٠.				6-inch
feet.	4,359															o-inch
		-			•											

113,675 feet.

This gives a total of 232 miles 2,245 feet in the city.

The demand upon the Department, notwithstanding the large yearly mileage of pipe laid, appears to be increasing. It has become necessary to provide water facilities for all parts of the city where, formerly, the people depended upon wells for their supply. It is now an exception that houses can be leased, or new buildings erected, where not accessible to water.

The small mains in following-named streets were taken up and replaced by larger ones, viz.:

North Division street, Michigan to Jefferson	4, 167	feet.
Carroll street, Washington to Michigan	1,509	feet.
Delaware avenue, Virginia to Niagara street	4,165	feet.
Seneca street, Michigan to Louisiana	1,987	feet.
Tonawanda street, Amherst street to 500 feet southerly.	500	feet.

FIRE-HYDRANTS.

There were expended \$8,928.68 in improving and renewing old fire-hydrants. With improved, first-class fire engines, it became necessary to increase the supply-pipes and replace old hydrants with new ones with larger nozzles. The standard pattern now in use has one four and one two and one-half inch opening.

NEW RESERVOIR.

The time has now come when, in our judgment, it is not prudent to longer delay the construction of a large storage and distributing reservoir upon the Dodge farm. This property was purchased by the city in 1874, in contemplation of the requirements of this, the highest land in the city, as a distributing point of the water system. The territory to be supplied from this point, is the eastern and south-eastern portions of the city. Water mains are extended, in many places, some seven miles from the pumping station and the present reservoir, and, at the extreme ends of pipes, the pressure is not as good as we would wish; and, with the continued rapid growth of this, the eastern and south-eastern portions of the city, the water system must be

extended and improved, that manufacturers and others in such territory may be adequately supplied.

NEW BOILER-HOUSE.

We have under contract the erection of a new boiler-house and the enlargement of the engine-house; when completed, will give the much-required increase of room.

WATER DEBT.

There has been no change in amount of water debt during the year. It remains the same as on January 1, 1887—\$2,778,382; although the interest account has been considerably reduced, as \$150,000 of 7 per cent. interest-bearing bonds, falling due March and April 1, 1887, were refunded at lower rate of interest, viz., 3½ per cent. These refunded bonds were sold at a premium of \$10,860. There will become due, during the coming year, \$200,000 of 7 per cent. bonds. We would recommend that they be refunded at a lower rate of interest.

The payment of interest upon bonds by the Water Department is, in our judgment, wrong, as the interest should be borne by the city at large, as is now the case with all other bonds issued by the city. The water consumers of to-day should not alone bear the full burden of a debt contracted for the benefit of the whole.

OFFICE.

The Department has outgrown its present office quarters in the City and County Hall, the space allotted to the public being some twelve by twenty feet, with one door for entrance and exit for some 27,000 water consumers to transact their business twice each year. The inside desk arrangement is not ample for the transaction of the Department's business. Temporary relief should be at once given by changing the present office arrangement, as may be best suggested, and steps taken to provide larger and more suitable quarters in the City and County Hall, or outside of it.

For particulars in detail, we refer you to the reports of the Superintendent and Registrar, which are made a part of this report.

All of which is most respectfully submitted.

L. P. REICHERT,
JAMES RYAN,
S. K. WORTHINGTON,

Water Commissioners.

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REPORT

OF THE

Superintendent and Engineer

FOR

1887. .

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BUFFALO CITY WATER WORKS.

Superintendent and Engineer's Office.

Buffalo, January 1, 1888.

To Louis P. Reichert, James Ryan and S. K. Worthington, Water Commissioners:

GENTLEMEN—Herewith is presented the report showing the operation of the Department, and the detailed statement of the same for the year 1887:

LOWER PUMPING STATION.

The alterations, additions and improvements made necessary by the new 20,000,000-gallon engine for the high service are well advanced, and will be completed before the engine is received. Worthington Engine No. 2 is in need of a thorough repairing and new foundation. All of the other engines are in a good, serviceable condition, and have been in constant use throughout the year. Additional boilers and a chimney for the low service are required immediately. As to increasing the capacity of the work I can only renew my recommendations of last year.

UPPER PUMPING STATION.

These engines are in good order, and the requirements are an additional boiler.

INLET PIER AND TUNNEL.

The work contemplated last year cannot safely longer be delayed. In cold days and low water, the capacity of both tunnels have been fully reached.

THE DODGE FARM RESERVOIR.

I renew my recommendation of the last three years. This work should be commenced immediately.

DISTRIBUTION.

There were laid twenty-one miles 2,795 feet of pipe of various sizes, at a cost of \$152,872.36, making the total amount of pipe 232 miles 2,245 feet.

There were placed in the mains 3,030 additional taps, making the total number 29,467.

One hundred and seventy-seven hydrants were located on new line of pipe, making the total number in use for fire purposes, 2,140.

Two hundred and sixty-one valves were placed on new mains.

There are ninety-five meters on large supply, and thirty-five hydraulic elevators. The amount of water registered by them was 1,818,272,830 gallons, the amount received from it being \$57,471.90. The expense of their maintenance was \$924.60. The total revenue for the year was \$476,411.87.

The average daily consumption was 38,484,936 gallons, being 153 gallons per head of population.

LOUIS H. KNAPP,

Superintendent and Engineer.

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REPORT

OF THE

REGISTRAR

FOR

1887.



REGISTRAR'S OFFICE.

Buffalo, January 1, 1888.

Louis P. Reichert, James Ryan and S. K. Worthington, Water Commissioners:

Gentlemen—In compliance with the requirements of your Honorable Body, I have the honor to submit my report for the year ending December 31, 1887.

The total receipts and disbursements of the Department for the year were as follows:

RECEIPTS.

Cash on hand January 1, 1887	\$ 23,543.46
Cash Receipts for year \$477,870.25	
Less Frontage Tax rebated 1,458.38	476,411.87
Appropriated from the General Fund by order Council	
for Distributing Mains	55,006.65
	\$554,961.98

DISBURSEMENTS.

Interest on Water Bonds	. \$	\$166,741.74
Maintenance and Repairs		127,065.25
Improvements and Extensions		209,542.10
Cash Balance on hand January 1, 1888		51,612.89 \$554,961.98

REVENUE.

The total net Revenue of the Department for the Year was
Less Frontage Tax rebated by Council, net . 1,458.38 \$476,411.87
The following itemized statement shows source of revenue,
viz.:
Water, for City purposes
From Domestic Consumers and Manuf'rs not metered . 302,782.61
" Flushing Sewers
" Street Sprinkling
" Circuses
" New Boxes
" Corporation Cocks 6,282.50
" Turn-on Fees
" Rent of Dodge Farm
" Builders
" Street Paving
" Manufacturers and Railroads, metered 57,471.90
" Plumbers' Licenses
. " Tapping Fines
\$472,781.42
FROM SALE OF OLD MATERIAL.
1837. Feb. 8, Star Oil Co 15 old barrels \$ 6.50
Mar. 19, Star Oil Co 12 old barrels 7.60
o, A. S. Hetter manure 0.00
April 9, Star Oil Co 8 old barrels 6.00
21, j. McMarty I bay noise 130.00
" 26. J. J. Collins pipe

31, M. Lichtenstein . junk and old brass,

\$1,295.91

24.94

LABOR AND SUPPLIES.

Jan.	6, I H. Knapp sundry labor \$	7.27
"	7, L. V. R. R. Co placing hydrant.	148.46
"	17, Pratt & Letch-	
	worth labor and material	184.80
Feb.	12, Hingston&Woods.changing hydrant	5.25
Mar.	19, H. C. Springer . re-setting box	1.20
"	21, L. H. Knapp sundry labor	2.25
April	22, Hingston&Woods.repairing leak	33.67
"	25, Park Commis'ners, repairing pipe .	9.23
"	30, Miller, Greiner &	
	Co sundry labor	26.13
May	17, M. Shire forcing out pipe .	.60
"	23, Park Commis'ners.labor and material	10.28
June	9, L. H. Knapp sundry labor	11.25
"	17, L. P. Reichert . " "	.80
"	21, Colvin & Doris . repairing hydrant	5.00
July	5, J. Kennedy labor at house on	
	Mariner st	3.00
"	13, L. V. Brew'g Co. 4-inch branch	49.83
"	13, L. H. Knapp labor	.75
"	15, B. Gas-Light Co. connection	28.69
"	18, J. Kittinger laying pipe	250.00
"	19, J. Longino labor	3.00
"	25, Irlbacker & Davis.labor and material	
	St. Louis' church	25.00
Aug.	5, G. W. Miller, connection on	
	North st	18.47
"	9, Park Commis'ners. labor and material	
	connection	36.00

Aug.	13, L. H. Knapp labor	1.50
. "	13, M. Beck Brewing	
	Co 6-inch connections	33.08
"	22, Walkam, Dohn &	
	Co connection	35.77
"	23, Howard IronWks. connection	78.81
"	23, J. D. Smith labor and 4-inch	
	double hub	3.00
"	30, P. S. No. 31 branch for school	135.00
"	17, A. Cutler & Son. 4-inch branch	26.20
Sept.	2, Buffalo Cemetery	
	Association repairing leak	3.90
"	7, J. P. Zenner excavating trench	250.00
"	9, C. J. Hamilto i laying pipe	172.00
"	9, C. J. Hamilton . ""	12.08
"	14, Seaver & Kunz . " "	530.00
"	19, T. Dark sundry repairs	38.68
44	19, " " repairing pipe	9.74
4.6	19, " " · · changing hydrant	6.10
	19, " " repairing pipe	5.50
"	19, J. D. Smith 4-inch branch	10.43
"	20, Irlbacker & Davis. 4-inch pipe, &c	26.55
"	20, Irlbacker & Davis.labor and material	
	at Music Hall.	25.00
"	20, D., L.&W.R. Co. setting hydrant.	46.90
"	23, L. V. R. R. Co. changing hydrant	3.55
46	28, H. M. Watson . laying pipe	148.17
Oct.	3, D. Sourwine . labor	1.13
"	4, B. S. R. R. Co 6-inch branch	48.72
66	15, Park Commis'ners.setting hydrant.	43.09
"	20, R. & P. R. R. Co. connecting meter	95.71

Oct.		
.,	20, R. & P. R. R. Co. meter \$ 320.00	•
"	25, Bell Teleph'e Co. changing pipe 41.38	•
"	28, E. L. Cook laying pipe 461.83	}
"	31, L. H. Knapp sundry labor 9.75	
Nov.	10, Rumsey & Co valve box, &c 10.11	
Dec.	16, L. H. Knapp labor 1.75	
"	16, C. E. Richardson.labor, &c 3.75	
"	22, HolyAngels'Ch'h.4-inch branch . 163.04	ļ
"	31, P. Becker 6-inch pipe, &c 53.76	
"	31, Howard Iron Wks. 12-inch branch . 75.76	ı
"	31, A. Ring plank	
		\$ 3,792.92
		\$477,870.25
Less	amount rebated by Council, net	1,458.38
	*	\$476,411.87
В		• • • • •
В	ALANCE SHEET, BUFFALO CITY WATER WORKS, DEC.	• • • • •
B.	ALANCE SHEET, BUFFALO CITY WATER WORKS, DEC. Buffalo City Water Works Con-	• • • • •
	Buffalo City Water Works Con- struction \$ 584,382.00	• • • • •
	Buffalo City Water Works Construction \$ 584,382.00 Buffalo City Water Works Exten-	• • • • •
2.	Buffalo City Water Works Construction \$ 584,382.00 Buffalo City Water Works Extension Fund	31, 1887.
2.	Buffalo City Water Works Construction \$ 584,382.00 Buffalo City Water Works Extension Fund	31, 1887.
2. 3.	Buffalo City Water Works Construction	31, 1887.
2. 3. 4.	Buffalo City Water Works Construction	31, 1887.
2. 3. 4. 5.	Buffalo City Water Works Construction	31, 1887. 32,778,382.00 80,894.07
3.4.5.6.	Buffalo City Water Works Construction	31, 1887. 32,778,382.00 80,894.07
3.4.5.6.	Buffalo City Water Works Construction	31, 1887. 32,778,382.00 80,894.07
2. 3. 4. 5. 6. 7.	Buffalo City Water Works Construction	31, 1887. 32,778,382.00 80,894.07

^{*} The revenue for the year was reduced \$11,129.54 by rebate made of 1886 frontage tax during first part of year.

18.	Supply Account		\$336,607.35
44.	Store-H ouse	3,106.12	
66.	Pipe and Specials		2,991.04
86.	Lead	715.93	
110.	General Street Repairs	3,890.72	
I 20.	Labor Trench Account	1,406.24	
124.	Meter Repairs	924.60	
129.	Valve Repairs	1,214.41	
143.	Hydrant Improvements	8,928.68	
152.	Service Leaks	419.83	
158.	Joint Leaks	993.19	
161.	Repairs, Free Hydrants, Foun-		
	tains, etc	694.45	
162.	Salaries	13,699.74	
163.	Inspectors	9,024.07	
164.	Tapping	1,827.43	
165.	Hostler	1,236.50	
166.	Watchman	1,071.35	
167.	Teamster	1,006.34	
168 .	Engineers, Upper Engine-House,	2,499.97	
169.	Firemen, Upper Engine-House,	· 1,200.00	
170.	Labor, Upper Engine-House	1,721.50	
171.	Engineers, Lower Engine-House,	4,049.94	
172.	Firemen, Lower Engine-House,	6,570.00	
173.	Labor, Lower Engine-House	7,866.89	
₹74.	Reservoir	1,126.38	
175.	Pipe Inspector	549.00	
177.	New Maps	1,760.60	•
z 78.	Louis P. Reichert	1,200.00	
179.	James Ryan	1,800.00	
180.	S. K. Worthington	1,200.00	

NINETEENTH ANNUAL REPORT OF 30 Fuel 67,040.78 Advertising 186. 150.18 187. Feed 1 045.38 Stable Supplies. 191. 631.82 Harness Repairs 192. 108.20 Wagon and Sleigh Repairs. . . 193. 404.52 Veterinary 195. 125.95 196. New Harnesses purchased . . . 44.00 Wagons and Sleighs purchased . 197. 175.00 198. Horses purchased 415.00 Repairs, Store-House Building . 36.24 199. Repairs, Upper Engine-House 201. Building 99.83 Repairs, Lower Engine-House 203. Building 1,494.99 206. Repairs, Low-Service Boilers, Lower Engine-House 3,356.95 Office Expenses, Printing, etc. . 208. 2,680.13 Clerk at Pump-House 209. 513.00 High-Service Boilers, Repairs, 210. Lower Engine-House 580.72 Repairs, Engine No. 1, Upper Engine-House 66.66 Repairs, Engine No. 2, Upper 215. Engine-House 230.53 218. Supplies, Upper Engine-House. 466.81 Repairs, Boilers, Upper Engine-222. House 122.33 Repairs, Machinery, General 223. Upper Engine-House 772.40 Repairs Engine No. 1, Lower 225. Engine-House

216.81

123.50

311.

New Boxes

NINETEENTH ANNUAL REPORT OF

32

9			
312.	Plumbers' License		\$710.00
314.	Tapping Fines /		1.00
401.	Freight and Express \$	117.83	
401.	Rent of Bell Telephone	263.03	
402.	Repairs, Dodge Farm	10.80	
403.	Bridge Repairs	926.25	
404.	Bird Island Pier	271.21	
407.	New Boiler-House, Lower Engine-		
	House	4,753.13	
409.	Electric-Light Plant, Lower		
	Engine-House	258.41	
410.	Accident	50.25	
412.	Joseph Tregilgus	1,334.08	
413.	New Engine-Room, Lower		
	Engine-House	3,546.40	
413.	New Engine, Lower Engine-		•
	House	321.62	
567.	Church street, Lower Terrace to		
	Delaware avenue	684.82	
567.	Babcock street, Seneca to Perry,	1,228.09	
568.	Genesee street, Best to Bailey		
	avenue	10,803.01	
568.	Delaware avenue	7,237,95	•
568.	Churchill street, Amherst to end		
	of street	574-93	
569.	North Division street, Michigan		
	to Jefferson	12,498.20	
569.	Seneca street, Michigan to		
	Louisiana	4,369.90	
569.	Avenue A, Genesee to Northamp-		
	ton	5,094.51	

THE BUFFALO CITY WATER WORKS.

370.	rior mampion street, jeneroon to	
	Avenue A	5,992.46
570.	Gull street, Niagara to railroad.	323.61
570.	Grant street, Bouck to Auburn	
	avenue	695.37
571.	Walden avenue, Bailey avenue to	
	City Line	5,154.08
571.	School street, Fargo to Plymouth	
	avenue	658.86
571.	Plymouth avenue, School to	
	Hampshire	390.27
572.	Albany street, West avenue to	
	Hampshire	1,371.64
572.	Deshler street, Broadway to end	
	of street	1,174.22
572.	Cayuga street, Jefferson to Grey.	410.60
573.	Grey street, Carlton to High	651.58
573-	Maurice street, Elk to Prenatt.	684.58
573.	Mohr street, Broadway to	
	Grimes	1,132.54
574-	Lyman street, Metcalfe to Jones.	388.49
574.	Metcalfe street, end of street to	
	Lyman	218.22
574.	Jones street, Lyman 250 feet	
	south	352.20
575.	Red Jacket street, Perry to Scott.	158.89
575.	Richmond avenue, Ferry to	
	Butler	482.24
575.	Prenatt street, Euclid place to	
	Scott	540.66
576.	Jefferson street, raising pipe	219.78

NINETEENTH ANNUAL REPORT OF 34 576. Masten street, Best to Main . . \$1,968.12 North street, Locust to Orange. 450.58 576. Central avenue, end of pipe to 577. Lovejoy 881.99 Rose street, High to North . . 577. 454.43 Sweeney street, Best to Genesee. 719.85 577. Ellicott street, Dodge to North-578. ampton 635.01 Gorman street, Elk to Perry . . 648.37 578. Gay street, Michigan to Potter. 329.07 578. Lovejoy street, Sherman to Coit. 1,059.36 579. Maryland street, Niagara to 579. Prospect avenue.... 423.89 Meyers street, Genesee to Best . 579. 540.51 Vandalia street, South street to 580. railroad 309.12 Moore street, Elk to railroad. 580. 127.95 Broadway, Bailey avenue to rail-580. road 3,756.28 Babcock street, Seneca to Wes-581. cott 858.00 Tonawanda street, Niagara to 581. Amherst 3,673.28 West Bennett street, William to 581. Clinton 495.24 Lovejoy street, Central to Bailey avenue....... 337.72

North street, Rose to Jefferson .

Summer street, Seneca to 125

feet south

176.44

129.26

582.

582.

avenue

Seymour street, Bond to Lord.

Lovejoy street, Detroit to Fill-

Raze street, Bristol to Jerry . .

Sweet avenue, Broadway, 300 feet south.

more.......

587.

499.97

599.13

748.97

613.94

339.82

THE BUFFALO CITY WATER WORKS.

NINETEENTH ANNUAL REPORT OF 36 588. Gelston street, end of pipe to Bouck avenue \$ 247.75 Hampshire street, Thirteenth to 589. . Ferry 2,358.03 589. Fillmore avenue, Sycamore to Broadway 1,521.31 589. Gilford street, Broadway to Sycamore. 1,426.91 Jersey street, Lake View avenue to canal 597.70 Fox street, Broadway to North. 590. 255.05 Thomas street, Howard to Met-591. calfe 672:85 Breckenridge street, Niagara to 59 I. railway 345.74 Vary street, Spring to Jefferson. 591. 675.14 Sherwood street, Hampshire to 592. Arkansas 490.63 Barker street, Main to 75 feet 592. west 93.43 Ellicott street, Seneca to Ex-592. change 864.11 Carroll street, Washington to 593. Michigan 1,483.34 Military road, Hertel avenue to 593. 1,200 feet north 6,762.14 Dodge street, Jefferson to Mas-593. ten 1,170.58 West Parade avenue, Northamp-594. ton 300 feet south 265.81

fornia

293.42

600.

THE BUFFALO CITY WATER WORKS.

37

NINETEENTH ANNUAL REPORT OF 38 600. Dodge street, Jefferson to end of street \$ 1,960.19 Kingsley street, Jefferson to 600. 1,271.96 Alvin alley, Urban alley to end of street 187.53 Churchill street, end of pipe to Austin 598.46 Webster street, Ferry to Breckenridge 440.57 Riley street, Jefferson 500 feet 602. east 720.51 602. Wilson street, Sycamore to Broadway 1,366.55 Hydraulic street, Carroll to 602. 262.61 Summer street, Howard to Rich-603. mond avenue 88.33 Eighteenth street, Massachusetts 603. to Hampshire 549.76 Mackinaw street, Sidway to Fitz-603. gerald 638.70 Main street, Vernon to Russell . 604. 235.16 604. Kusciuszko street, Broadway to Stanislaus 1,148.53 604. Perry street, Gorman to Winona 270.75 De Witt street 605. 2,344.17 "C" street 605. 676.53 Delevan avenue, Parkway to 605. Linwood avenue. 3,026.93

	THE BUFFALO CITY W	ATER	Works.	. 39
606.	Chapin parkway	\$	3,377.50	
606.	Louisiana street, bridge over			
	canal		1,106.83	
60 6.	Clinton avenue, Elmwood ave-			
	nue to Chapin parkway		9,899.78	
411.	Gas bills		519.45	
		\$4,8	366,536.55	\$4,866,536.55
2.			orks, Janu	ARY 1, 1888.
	Buffalo City Water Works Construction Account			ARV 1, 1888.
3.	Buffalo City Water Works Con- struction Account Buffalo City Water Works Ex-	\$ 5	584, 382. 0 0	arv 1, 1888.
	Buffalo City Water Works Construction Account Buffalo City Water Works Extension	\$ 5	;84, 382.00 286, 728.01	
3.	Buffalo City Water Works Con- struction Account Buffalo City Water Works Ex-	\$ 5	;84, 382.00 286, 728.01	ARV 1, 1888. \$ 2,778,382.00 51,366.26
3.	Buffalo City Water Works Construction Account	\$ 5	;84, 382.00 286, 728.01	\$ 2,778,382.00
3· 4· 5·	Buffalo City Water Works Construction Account Buffalo City Water Works Extension	\$ 5 1,2	;84, 382.00 286, 728.01	\$ 2,778,382.00 51,366.26
3· 4· 5·	Buffalo City Water Works Construction Account Buffalo City Water Works Extension Bonds Payable	\$ 5 1,2	;84, 382.00 286, 728.01	\$ 2,778,382.00 51,366.26
3· 4· 5· 7·	Buffalo City Water Works Construction Account	\$ 5 1,2	;84, 382.00 286, 728.01	\$ 2,778,382.00 51,366.26

\$4,258,610.01 \$4,258,610.01

COST OF WATER WORKS FROM PURCHASE TO DATE.

Original Purchase	•														\$ 705,000.00
Dodge Farm															100,726.14
Extensions and Ir	npr	ov	eir	ıeı	nts										4,004,644.67
Interest on Bonds									٠.						3,153,852.71
Maintenance and	Re	pa	irs								•				1,542,978.94
On hand January	1,	18	87							•					51,612.89
	• •													•	\$9.558,815.35
						RE	CE	ΊP	TS.						
Water Rates															\$4,836,820.83
Bonds															3 028,382.00
Taxes													•		1,693,612.52
Total															\$0,558,815.35

PRESENT STANDING OF WATER WORKS ACCOUNT.

	Jan. 1, 1887.	Added during the Year.	Jan. 1, 1888.
Original Purchase	\$ 705,000.00		\$ 705,000.00
Real Estate, including Taxes	100,726.14		100,726.14
Engines	241,998.58	.	240,998.58
Holly Pumping-House	12,092.25		12,092.25
Holly Pumping Machinery	41,307.41		41,307.41
New Engine House	82,610.32	\$ 3,868.02	86,478.34
Gas Well	9,406.44		9,406.44
Inlet Tunnel and Pier	530,346.56		530,346.56
Main Pipes, Branches, Hydrants, etc	2,729,147.08	198,425.50	2,927,572.58
Coal and Boiler House and Chimney.	26,711.53		26,711.53
Gaskill Engine	94,892.44		94,892.44
Coal Tunnel connecting Upper and Lower House	3,351.19		3,351.19
New Valve-House	910.70		910.70
Overhead Crossing	. 1,447.87		1,447.87
New Boiler-House	3,744.06	4,753.13	8,497.19
Electric-Light Plant			2,734.76
Repairs Boilers, and moving same	2,922.20	2,495.45	5,417.65
Total	\$4,588,349.53	\$209,542.10	\$4,797,891.63

WATER BONDS.

Bonds outstanding January 1, 1888, issued for the purchase, extension and improvement of the Water Works.

	Date of	Issue	Rate of Interest.	When Due.	Amount.			
June	1, 1870		7	June 1, 1888	\$ 100,000.00			
Oct.	1, 1870		7	Oct. 1, 1889	145,000.00			
an.	1, 1871	.	7	Jan. 1, 1890	50,000.00			
Jan.	1, 1871		7	Jan. 1, 1891	100,000.00			
Aug.	1, 1871		! 7	Aug. 1, 1891	50,000.00			
Oct.	1, 1871		1 7	Oct. 1, 1891	100,000.00			
uly	1, 1872		7	July 1, 1890	100,000.00			
Oct.	1, 1872	.	7	Oct. 1, 1892	100,000.00			
Dec.	1, 1872		7	Dec. 1, 1888	100,000.00			
Dec.	1, 1872		7	Dec. 1, 1892	100,000.00			
Sept.	1, 1873		7	Sept. 1, 1903	200,000.00			
April			7	April 1, 1905	100,000.00			
uly	1, 1874		7	July 1, 1906	100,000.00			
Aug.	1, 1874		7 '	Aug. 1, 1908	100,000.00			
Oct.	1, 1874		7	Oct. 1, 1908	79,382.00			
Aug.	1, 1875		7.	Aug. 1, 1909	100,000.00			
Jan.	1, 1876	.		Jan. 1, 1896	50,000.00			
July	1, 1876		7 6	July 1, 1896	100,000.00			
ept.	2, 1878		5	Sept. 2, 1898	50,000.00			
April	25, 1879	.	5 .	April 25, 1898	100,000.00			
April	26, 1880		5 1	April 26, 1899	100,000.00			
July	1, 1880		1 4	July 1, 1904	50,000.00			
Sept.	1, 1880		4 1	Sept. 1, 1904	100,000.00			
Nov.	26, 1880		4	Nov. 26, 1897	64,000.00			
April	25, 1881		4	April 25, 1900	100,000.00			
April	1, 1884	.	4	April 1, 1901	90,000.00			
July	1, 1885		31/2	July 1, 1905	100,000.00			
Oci.	1, 1886		31/2	Oct. 1, 1903	100,000.00			
Marc	h i, 1887		31/2	Mar. 1, 1906	100,000.00			
April	1, 1887		31/2	April 1, 1906	50,000.00			

INTEREST PAID ON WATER BONDS DURING 1887.

January 24th .										\$ 8,750.00
February 21st.										13,750.00
March 21st										30,653.37
April 18th										1,280.00
May 23d										10,500.00
June 20th										19,750.00
July 18th										8,750.00
August 1st										12,000.00
September 19th										29,778.37
October 24th .										1,280.00
November 21st										10,500.00
December 19th										19,750.00
Total .										\$166,741.74

COMPARATIVE STATEMENT.

Revenue received, coal consumed and water pumped annually for seventeen years.

							ž	Pipe.	Fach	Each Year.
Year.	Revenue.	Expenses.	Consumed, Tons.	Water pumped, Gallons.	water pumped Daily, Gallons.	Extensions,	səlild	Feet.	Miles.	Feet
871	\$124,865.00	\$77.456.95	3,645	2,775,752,490	7,604,801	284,297.84	67	4,644		
1872	138,150.00	69,228.74	4,546	3,226,891,140	8,840,797	355,492.46	77	2,921	6	3,55
373	168,267.20	77,747.60	4,720	3,329,193,162	9,316,598	308,600.46	81	4,912	4	1,99
374	176,219.10	66,218.50	2,852.50	3,040,012,107	8,509,481	307,355.64	98	4,905	4	5,27
\$75	184,516.48	64,862.37	3,422.67	3,828,594,027	10,489,298	159,098.75	16	1,591	4	96,1
376	191,335.84	61,474.22	3,357.88	4,020,936,278	11,016,263	106,000.21	6	4,931	-	3,34
377	189,296.90	57,553.27	3,249	4,267,218,162	181,169,11	17,014.05	93	2,631		2,0%
378	200,183.28	55,230.50	3,524.50	4.589,879,986	12,503,078	48,555.32	\$	3,376	-	7
6/8	205,415.75	54,497.22	3,979.75	5,291,337,520	14,496,815	11,457.50	6	929	8	2,53
	216,214.37	60,983.67	5,809	5,993,009,343	16,369,802	161,883.89	102	873	٠,	77
188	210,031.46	76,629.09	7,192.80	6,344,182,224	17,394,973	201,487.10	114	4,149	12	3,27
382	362,762.07	79,105.90		7,076,212,870	19,386,885	18.719,091	131	524	91	1,65
83.	426,353.57	87,193.53	8,811	8,568,435,200	23,475,192	200,029.90	150	529	81	5,13
	381,581.64	81,078.88	9,128	8,789,971,200	24,082,112	186,623.92	162	2,031	14	5
585	444,440.77	92,438,30	10,503	10,441,393,340	28,606,557	327,918.82	161	830	27	1,47
	477,209.57	95,031.04	11,280	12,069,882,676	33,068,172	342,493.57	213	1,218	22	388
788	476,411.87	127,065.25	14,374	14,033,297,522	38,484,936	209,542.10	232	2,245	21*	2,78

• This includes two miles 1,768 feet of large mains laid to replace small ones.

SCHEDULE OF BILLS AND ACCOUNTS.

Approved during the Year 1887 by the Water Board and paid by the City Treasurer.

IMPROVEMENTS AND EXTENSIONS.

1887. Date.	Name.	Description.	Amount.
Jan.	31, Walbridge & Co	. Sundries	\$ 6.41
6 6	Charles Suar	. Pine plugs	19.00
••	Adams & White	. Stationery	4.05
. ••	C. J. Hamilton	. Lumber	13.73
4.6	Beals & Brown	. Supplies	21.29
4.6	Goodyear Rubber Co.	. Hose, etc	12.50
"	Buffalo Scale Co	. One grocer scale	7.00
46	Lesswing & Stines	. Wagon repairs	14.55
• 6	James Boland	. Boiler repairs	1,187.70
٠.	M. Riter	. Repairing boilers	545.00
	M. Riter	. Repairing boilers	226.58
	Williamsville Lime Co.	. Cement	44.40
• •	A. L. Barber	. Asphalt paving	109.16
4.6	John C. Post	. Paint supplies	3.75
• 6	Weed & Co	. Supplies	9.50
4 6	G. C. Grimard	. Pay roll, January	1,462.79
"	Joseph Tregilgus	. Payment of judgment	
		for services previous	
		to year 1881	1,334.08
Feb.	7, Machwirth Bros	. Repairs boilers	25.98
4.6	J. G. Johnson & Co	. Checks	. 7 2
"	John C. Henry	. Wagon repairs	7.25

Feb.	7,	John Dark Clearing and repairing	
		sewer	\$ 48.74
. "		Becker & Wickser Harness repairs	23.90
"		Machwirth Bros Building repairs	72.27
"		John C. Post Supplies	23.20
"		Machwirth Bros Contract encasing boil-	
		ers, L. E. H	413.87
"		Joseph Bunsall Contract covering	
		steam-pipe	310.00
Feb.	14,	Weed & Co · · · Supplies	6.74
Feb.	21,	U. S. Electric-light Co. Extending and repair-	
		ing	86.79
"		Goodyear Rubber Co Supplies	6.00
"		Lowell Felting Mills Hair felt	36.84
"		John Mesmer Coach hire	4.00
"		C. J. Hamilton Lumber	27.91
"		C. H. Donaldson, Cash'r. Wages weekly laborers.	309.07
Feb.	28,	C. H. Donaldson, Cash'r. Wages weekly laborers.	282.50
"		C. H. Donaldson, Cash'r. Pay roll, February	1,865.54
Mar.	7,	G. D. Barr Supplies	14.50
• 6		M. Riter Two iron furnaces	24.00
Mar.	14,	Felthousen & Whittet . Steam-gauge	11.50
4.6		C. J. Frank Handles	25.07
		Ulbrich & Kingsley Supplies	14.00
Mar.	21,	C. J. Hamilton Lumber	4.93
Mar.	28,	Fowler & Sons Supplies	36.24
"		The Courier Co Office advertising	4.48
"		C. H. Donaldson, Cash'r. Pay roll, March	3,047.79
April	4	C. H. Donaldson, Cash'r Office supplies	50.00

	THE BUFFALO CITY WATER WORKS. 47
April	11, A. J. Grad New wagon \$ 90.00
"	Engin.'s News Pub. Co. Office advertising 8.80
"	J. N. Matthews Office advertising 20.00
44	E. H. Butler Office advertising 7.50
"	Buffalo Gas-light Co Coke 15.00
"	The Courier Co Office advertising 2.78
"	C. J. Hamilton Lumber 13.95
"	Becker & Wickser Supplies 4.25
Apıil	18, A. Scheller 107.54
"	Eddy Valve Co Valves 2,046.00
"	Weed & Co Hardware 1.00
**	S. D. Colie Lumber 108.76
• 6	Ulbrich & Kingsley Paper 28.50
April	25, Lesswing & Stines Supplies
"	Joseph Churchyard Map cases 25.00
"	C. J. Heinold Oats 96.75
May	2, G. D. Barr Couplings 12.00
"	Reinecke & Zesch Advertising 13.50
	C. H. Donaldson, Cash'r. Pay roll, April 3,040.02
"	C. H. Donaldson, Cash'r. Weekly wages laborers. 255.50
46	John C. Post Supplies 1.45
May	9, Walbridge & Co Shovels 17.80
44	Buffalo Gas-light Co Coke and cartage 9.00
"	C. H. Donaldson, Cash'r. Wages, weekly laborers, 265.34
May	17, C. H. Donaldson, Cash'r. Wages, weekly laborers, 149.70
May	17, S. D. Colie Lumber 53.97
"	D. J. Stickney Coal 5.50
"	H. H. Baker & Co Pipe packing 399.10
"	Weed & Co Supplies 9.60

May	23,	C. H. Donaldson, Cash'r. Weekly wages laborers. \$ 167.28
May	31,	C. H. Donaldson, Cash'r. Weekly wages laborers. 1,294.79
"		C. H. Donaldson, Cash'r. Pay roll, May 3,148.13
June	6,	Eddy Valve Co Valves 191.00
"		Buff. Cast-Iron Pipe Co. Horses 350.00
"		Scatcherd & Son Lumber 20.00
June	I 2,	Eddy Valve Co Valves 162.00
• "		International Ferry Co. Inlet pier 195.00
"		H. Somerville & Son Veterinary services 34.75
"		Adams & White Office supplies 1.35
"		P. B. McNaughton Paving 121.00
		Buff. Cast-Iron Pipe Co. Pipe 1,315.17
		Buff. Cast-Iron Pipe Co. Pipe 3,687.96
"		Buff. Cast-Iron Pipe Co. Pipe 3,833.18
4.6		Buff. Cast-Iron Pipe Co. Pipe 3,502.65
"		C. H. Donaldson, Cash'r. Pay roll, June 4, 1887 . 1,430.06
"		C. H. Donaldson, Cash'r. Pay roll, June 12, 1887, 1,487.43
June	20,	Sidney Shepard & Co Supplies 7.23
"		Buffalo Sewer-Pipe Co Pipe
"		J. H. Ullenbruch & Co. Sundries 5.50
"		James Franklin Tallow 4.90
"		Powell & Plimpton Supplies 11.44
"		French & Kirkholder. Pails and covers 2.50
"		Buff. Cast-Iron Pipe Co. Specials 407.47
"		Eddy Valve Co Valves 760.00
"		Fox & Holloway Sand 5.62
"		S. D. Colie Lumber
4.6		D. J. Stickney Coal 4.00
44		J. C. Post Supplies 3.81

June	27,	Buff. Cast-Iron Pipe Co. Specials	\$ 53.66
		C. H. Donaldson, Cash'r. Pay roll, June 25, 1887,	1,591.46
"		C. H. Donaldson, Cash'r. Payroll, month of June,	3,208.66
July	II,	C. H. Donaldson, Cash'r. Pay roll, July 2, 1887.	1,632.68
July	18,	S. D. Colie Lumber	15.87
"		Buffalo Sewer-Pipe Co Pipe	81.00
"		Weed & Co Sundries	. 11.60
"		Buffalo Brick Association. Brick	9.80
"		Buffalo Gas Co Coke	21.00
"		O. Ulbrich Tracing cloth	9.00
"		G. V. Goll Plugs	56.24
"		A. W. Morgan Supplies	732.23
"		C. H. Donaldson, Cash'r. Pay roll, July 9, 1887.	1,254.44
July	25,	Times Printing House . Printing	355.00
"		J. H. Ruckel & Co Supplies	.13
"		Chas. Scheu Horse bedding	26. 25
"		Buffalo Chemical Works. Pig-lead	634.28
"		Eddy Valve Co Valves	80.00
"		Eddy Valve Co Valves	162.00
"		Buff. Cast-Iron Pipe Co. Pipe	3,816.37
"		Buff. Cast-Iron Pipe Co. Specials	556.81
4.6		Buff. Cast-Iron Pipe Co. Pipe	2,404.90
46		Buff. Cast-Iron Pipe Co. Specials	251.86
4.6		C. H. Donaldson, Cash'r. Pay roll	1,609.67
46		James D. Warren's Sons. Advertising	8.00
"		Bingham & Taylor Supplies	7.59
"		H. H. Baker & Co Supplies	
44		Lesswing & Stines Sundries	92.75
"		Fowler & Sons Sundries	25 24

Machwirth Bros. Supplies

8.59

4 6

THE BUFFALO CITY WATER WORKS.

Aug.	29, The Times Co., Limited. Advertising	\$ 24.04
"	John C. Post Supplies	8.71
"	Felthousen & Whittet . Sundries	11.55
"	Buff. Cast-Iron Pipe Co. Pipe	3,064.10
4.6	Buff. Cast-Iron Pipe Co. Specials	8.80
4.6	Buff. Cast-Iron Pipe Co. Specials	119.09
"	Buff. Cast-Iron Pipe Co	2,192.79
"	Buff. Cast-Iron Pipe Co. Pipe	3,702.44
. "	Buff. Cast-Iron Pipe Co. Specials	310.22
"	Buff. Cast-Iron Pipe Co. Pipe	
	N. Corrwith & Co.,	
	Chicago Lead	4,442.96
"	Buffalo Storage and Cart-	
	ing Co Freight and cartage	117.83
"	John T. Rees Pay roll	3,550.05
""	John T. Rees Pay roll	81.21
Sept.	6, James Boland Repairs	165.75
	James Boland Repairs	6.75
	James Boland Repairs	128.52
• •	P. B. McNaughton Repaying	1,073.10
44	John T. Rees Pay roll	1,457.67
Sept.	12, Buff. Cast-Iron Pipe Co. Specials	47.42
"	Buff. Cast-Iron Pipe Co. Pipe	3,740.62
• •	Buff. Cast-Iron Pipe Co. Specials	81.16
	Buff. Cast-Iron Pipe Co. Pipe	4,682.36
	Buff. Cast-Iron Pipe Co. Specials	121.84
4.6	Buff. Cast-Iron Pipe Co. Pipe	
• 6	Buff. Cast-Iron Pipe Co. Specials	378.43
• •	14'11 D	129.95
	Fowler & Sons Sundries	45.00
	S. Somerville & Son Veterinary	

	THE BUFFALO CITY WATER WORKS.	53
Sept.	12, J. H. Ruckel & Co Supplies	\$ 4.00
44	Williamsville Lime Co Cement	
	J. D. Warren's Sons Printing	56.00
••	J. D. Warren's Sons Advertising	10.00
••	Weed & Co Hardware	3.00
**	J. C. Post Sundries	7.65
	C. J. Heinold Groceries	121.25
••	Buffalo Gas-Light Co Coke	24.00
••	Pratt Hardware Co Hardware	12.28
••	Felthousen & Whittet . Sundries	4.75
••	Goodyear Rubber Co Supplies	9.05
4.	J. H. Allen Lumber	199.50
	Bickford & Francis Leather	11.00
"	S. D. Colie Lumber	18.68
4.6	C. H. Donaldson, Cash'r. Pay roll	1.270.72
	A. W. Morgan Supplies	818.26
6.	Henry Zurbrick Blower	75.00
4.	Plumb, Burdict & Bar-	
	nard Bolts	1.15
44	Jacob Ginther Covers	20.00
"	Charles Scheu Horse bedding	27.00
"	C. H. Donaldson, Cash'r. Pay roll	1,348.13
Sept.	26, C. H. Donaldson, Cash'r. Pay roll	•
"	C. H. Donaldson, Cash'r. Pay roll	
"	C. H. Donaldson, Cash'r. Pay roll	1,249.06
4.6	McGrath & Bisgood Cushion	3.60
Oct.	3, C. F. Hall & Co Sundries	117.00
44	Eddy Valve Co Valves	80. 00
44	W. H. Edson Soap	1.50
44	Taylor & Crate Lumber	4.17
44	Louis M. Merhoff Renairs	6 75

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Oct.	3, Adams & White Station					\$ 42.50
Oct.	10, C. H. Donaldson, Cash'r. Pay ro					854.03
"	The Courier Advert	ising				5.53
"	J. D. Warren's Sons Advert	ising				7.00
"	Buffalo Gas-Light Co Coke .					9.00
"	John C. Post Paint .					5.25
."	Citizens' Gas Co Coke .					.50
46	Buffalo Sewer Pipe Co. Pipe .					16.85
46	H. D. Taylor Washe	rs .				3.37
46	C. J. Heinold Supplie	es .				154.23
44	Hardwicke & Ware Turnin	ıg pin		٠.		.50
44	J. D. Warren's Sons Books					34.00
44	Fries & Co Repair	s				1.00
4.6	Goodyear Rubber Co Supplie	es				16.56
Oct.	17, C.H. Donaldson, Caşh'r. Pay ro	oll				963.17
Oct.	24, C. H. Donaldson, Cash'r. Pay ro	oll				1,027.62
6.	B. Cunningham Excava	ating				2,000.00
Oct.	31, Buff. Cast-Iron Pipe Co. Pipe .				•	1,458.36
	Buff. Cast-Iron Pipe Co. Specia	ds				110.72
4.6	Buff. Cast-Iron Pipe Co. Pipe					2,114.60
••	Buff. Cast-Iron Pipe Co. Specia	als				177.30
4.	Buff. Cast-Iron Pipe Co. Pipe					2,015.27
46	Buff. Cast-Iron Pipe Co. Pipe					3,137.78
46	Buff. Cast-Iron Pipe Co. Specia					
	Buff. Cast-Iron Pipe Co. Pipe					_
46	Buff. Cast-Iron Pipe Co. Pipe					-
"	Buff. Cast Iron Pipe Co. Specia					. 28
	S. D. Colie Lumb	er				110.54
	Star Oil Co Oil					14.70
						9.60
						•
		• · ·				I

Nov. 21,	Scatcherd & Son Lumber	\$ 3.92
и,	C. J. Hamilton Lumber	31.25
6.6	Farrar & Treffts Sundries	10.00
"	Irlbacker & Davis Sundries	103.88
	Lesswing & Stines Repairs	35.91
"	P. B. McNaughton Repaving	82.79
"	P. B. McNaughton Repaving	1,167.31
4.6	C. H. Donaldson Pay roll	168.52
Nov. 28,	J. T. Rees, Registrar . Pay roll	3,109.46
"	J. T. Rees, Registrar Pay roll	240.05
"	B. Cunningham Contract	1,500.00
"	A. L. Barber Sundries	41.40
4.6	A. I. Barber Sundries	41.11
6.6	A. L. Barber Sundries	22.99
"	A. L. Barber Sundries	70.36
	P. G. Straub Sundries	76.33
4.6	Beals & Brown Spike	2.45
"	Collignon & Grimard . Corporation cocks	509.30
• •	M. Riter Labor	294.71
• 6	P. B. McNaughton Repaving	90.75
	Howard Iron Works Sundries	514.31
Dec. 5,	C. H. Donaldson, Cash'r. Pay roll	271.25
Dec. 12,	F. B. Gallagher, Cash'r. l'ay roll	96.00
• •	S. D. Colie Lumber	46.62
••	Buffalo Sewer Pipe Co. Sundries	46.29
4.6	J. C. Post Paint	4.03
4.6	Felthousen & Russell Supplies	12.35
Dec. 19,	Buff. Cast Iron Pipe Co. Specials	456.97
"	Buff. Cast-Iron Pipe Co. Pipe	., 0
"	Buff. Cast Iron Pipe Co. Pipe	
••	Buff. Cast-Iron Pipe Co. Pipe	969.78

	THE BUFFALO CITY WATER WORKS. 57
Dec.	19, Buff. Cast-Iron Pipe Co. Pipe \$ 247.12
4.6	Buff. Cast-Iron Pipe Co. Specials 18.26
4.	Buff. Cast-Iron Pipe Co. Specials 27.84
**	W. H. Arthur Paint 14.07
4.	James Boland Labor 14.94
	James Boland Labor 28.32
44	James Boland Labor 11.65
4.	James Boland Labor 5.75
4.4	H. H. Baker & Co Supplies 12.18
	Hand & Johnson, L. of T. Towing 17.00
4.6	S. Somerville & Son Veterinary 28.00
"	Buff. Cast-Iron Pipe Co. Specials 147.38
"	P. B. McNaughton Repairing 27.42
Dec.	23, C. J. Heinold Feed 126.11
	R. H. Thayer & Co Boxes 576.15
44	James Boland Repairs 150.85
"	J. H. Ruckel & Co Sundries 1.60
Dec.	28. Jno. T. Rees, Registrar. Pay roll 3,155.04 \$209,542.10
	MAINTENANCE AND REPAIR ACCOUNT.
1587. Date.	Name, . Description. Amount.
Jan.	17, G. C. Grimard, Cashier. Wages of laborers, three
	weeks \$1,045.62
46	G. C. Grimard, Cashier. Post office stamps 50.00
Jan.	24, G. C. Grimard, Cashier. Wages laborers 400.25
Jan.	31, Walbridge & Co Sundries 2.85
"	Howard Iron Works Hydrant repairs 19.30
	Hardwicke & Ware 11/4 in and 136 in tan 152

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Jan.	31,	Enterprise Oil Co Grease	\$ 6.00
"		H. H. Baker & Co Sash cord	1.51
"		Buff. Lubricating Oil Co. Oil	202.48
"		Adams & White Stationery	39.00
"		S. Chamberlain Wagon repairs	
"		C. J. Hamilton Lumber	4.25
"		M. Riter Steel plate with handle.	_
"		J. J. McWilliams Coal	. •
"		Machwirth Bros Stove-pipe, etc	
"		Urban & Co Meal and feed	
"		Beals & Brown Supplies	_
"		Goodyear Rubber Co Hose, etc	• •
"		Beals & Brown Water pails	0.0
"		C. J. Heinold Feed, etc	
"		M. E. Crowe	_
"		Sheeler & Sons Wire scoops	
"		The Times Co., Limited. Two copies Daily Times	-
"		James D. Warren Hydrant report blanks.	•
"		Haas & Klein Postals and printing	-
"		D. J. Stickney Coal	•
"		Farrar & Treffts Engine and boiler re-	-
		pairs	
"		Irlbacker & Davis Supplies	007.0
		Lesswing & Stines Wagon repairs	
"		S. Somerville & Son Veterinary	
"		A. L. Barber Asphalt paving	•
"		John C. Post Paint supplies, etc	
"		G. C. Grimard, Cashier. Weekly pay roll	
		G. C. Grimard, Cashier. January pay roll	
Feb.	7	Bell Telephone Co Rent of Bell telephone.	
	,,	S. S. Tewett & Co. Stove grate	

		THE BUFFALO CITY WATER WORKS.	59
Feb.	7,	J. H. Ruckel & Co Supplies	\$ 42.19
44		Farrar & Treffts General repairs ma-	
		chinery, L. E. Howe.	258.45
"		C. H. Donaldson, Cash'r. Wages weekly laborers.	346.50
Feb.	14,	Farrar & Treffts Engine repairs	177.17
"		C. J. Heinold Supplies	52.22
"		Farrar & Treffts Boiler repairs	63.95
4.6		Buff. Lubricating Oil Co. Oil	203.18
"		Hardwicke & Ware Supplies	14.72
"		M. Riter Repairs boilers	6.50
"		M. Riter Repairs boilers	41.64
"		Weed & Co Supplies	4.20
"		C. H. Donaldson, Cash'r. Wages laborers	307.27
Feb.	21,	Goodyear Rubber Co Supplies	456.20
"		D. E. Morgan & Son Shades and matting	6.07
"		D. J. Stickney Coal	5.00
"		J. J. McWilliams Coal	13.80
"		H. H. Baker & Co Sundries	14.13
"		Charles J. Heinold Salt and oats	107.83
"		J. H. Ruckel & Co Supplies	35.54
"		J. H. Ruckel & Co General repairs ma-	
		chinery	48. 66
"		C. J. Hamilton Lumber	6.91
Feb.	28,	C. H. Donaldson, Cash'r. Pay roll, February	3,731.08
March	7,	Buff. Lubricating Oil Co. Oil	25.68
"		Powell & Plimpton Supplies	5.35
"		Scatcherd & Son Lumber	2.04
"		J. F. Schoellkopf's Sons. Tan-bark	1.00
"		S. Chamberlain Repairs	3.23
"		Loegler & Ladd New sleigh and repairs.	62.00
"		Volker Mfg. Co Repairs of gauges	11.75

March	7,	H. R. Worthington Va	alve rods	\$ 76.82
"		C. H. Donaldson, Cash'r. W	ages weekly laborers.	339.00
March	14,	Walbridge & Co W	rire and scoops	6.75
"		John C. Post M	letallic lamp-black	1.60
• •		Buff. Lubricating Oil Co. O	il	194.07
"		Weed & Co H	lardware	4.65
4.6		Urban & Co Fo	eed	5.25
		National Meter Co M	leter supplies	9.66
• 6		D. J. Stickney Co	oal	14.75
••		C. E. Brinkworth St	tamps	13.00
		Ulbrich & Kingsley St		4.00
		Irlbacker & Davis Su	upplies and labor	38.05 ,
"		C. H. Donaldson, Cash'r. W	ages weekly laborers.	337-50
March	2I,	Jabesh Harris So	oap	43.00
66		Fries & Co R	Repairs	5.10
• 6		Goodyear Rubber Co H	lose	6.25
••		E. H. Butler O	office advertising	12.38
		J. J. McWilliams C	Coal	5.58
"		J. H. Ruckel & Co St	upplies	17.76
"		Hardwicke & Ware St	upplies	19.36
4.		C. J. Hamilton L	umber	71.80
. " "		C. H. Donaldson, Cash'r. W	Veekly wages laborers.	84.75
March	28,	Fowler & Sons St	upplies	14.55
4.4		Albert Schitler H	=	13.50
		E. G. Marvin So	upplies	42.00
6.		J. McComb Se	oft soap	10.00
4.6		C. H. Donaldson, Cash'r. W	Veekly wages laborers.	106.50
46		C. H. Donaldson, Cash'r. P.	ay roll, March	3,047.79
April	4,	C. H. Donaldson, Cash'r. W	Veekly wages laborers.	106.50
"		Farrar & Treffts S	upplies	22.09
"		Adams & White So	tationery	79.03

	THE BUFFALO CITY WATER WORKS.	61
April	11, C. H. Donaldson, Cash'r. Weekly wages laborers.	\$ 117.00
• 6	D J. Stickney Coal	13.75
• 6	The Courier Co Office advertising	2.90
. "	Becker & Wickser Supplies	17.95
April	18, Collignon & Grimard Supplies	12.80
"	U. S. Electric Light and	
	Power Co Brushes	6.00
44	Urban & Co Feed	5.10
**	Weed & Co Hardware	5.26
	C. J. Heinold Supplies	60.16
4.	Hardwicke & Ware Supplies	9.03
4.6	H. H. Baker & Co Supplies	8.52
• •	J. H. Ruckel & Co Supplies	5.77
	Swift & Stambach Gasoline	4.05
• 6	Buff. Lubricating Oil Co. Oil	162.78
4.5	C. H. Donaldson, Cash'r. Weekly wages laborers.	115.50
	Farrar & Treffts Supplies	124.11
April	25, J. J. McWilliams Coal	3,476.25
4.6	Lehigh Valley ('oal ('o. Coal	1,058.87
4.6	James Coyle Wheelbarrows	34.00
"	Wallace Johnson Estate. Horse	65.00
44	Adam Kaiser Straw	10.31
"	John Wahe & Co Pig-lead	4,309.44
	C. H. Donaldson, Cash'r. Weekly wages laborers.	110.01
May	2, Pratt & Letchworth Steel	14.38
"	Collignon & Grimard . Corporation cocks, etc.	244.88
••	C. H. Donaldson, Cash'r. Pay roll, April	3,040.01
••	C. H. Donaldson, Cash'r. P. O. stamps	50.00
May	9, John C. Post Supplies	12.98
"	Dun. Eubricating On Co. On	89.40
6.6	Holly Mfg. Co Casting	16.56

May	17,	James D. Warren's Sons. Printing, etc \$ 20.50
		James D. Warren's Sons. Printing 7.50
"		Wm. H. Edson Stable supplies 10.00
46		Urban & Co Feed 10.80
"		Weed & Co Supplies 5.69
"		Farrar & Treffts Repairs 27.50
May	31,	C. H. Donaldson, Cash'r. Pay roll, May 3,148.12
June		Lehigh Valley Coal Co. Coal 546.50
"		Goodyear Rubber Co Supplies 12.10
		Adams & White Supplies 19.81
"		P. B. McNaughton
"		C. H. Donaldson, Cash'r. Postage and incidentals 50.00
June	20,	Sidney Shepard & Co. Supplies 1.88
"	•	O. Reinecke Advertising 10.50
"		J. H. Ullenbruch & Co. Sundries 6.30
4.6		U. S. Electric Light and
		Power Co Sundries 61.04
		James Franklin Tallow 23.80
"		Powell & Plimpton Supplies
"		Felthousen & Whittet . Supplies 1.30
"		Enterprise Oil Co Compound 6.00
"		Fox & Holloway Sand 26.20
"		R. Hoffeld & Co Belt 10.50
"		Adams & White Supplies 13.5
"		J. H. Ruckel & Co Sundries 54.80
"		E. I. Hedstrom Coal 4,198.7:
"		A. H. Brown Sundries 79.4
"		Weed & Co Sundries 11.60
4.6		Farrar & Treffts Sundries 49.19
"		C. J. Heinold Supplies 4.99
"		J. J. McWilliams Coal 5,421.8

63	THE BUFFALO CITY WATER WORKS.	
. \$ 8.14	20, Goodyear Rubber Co Sundries	June
2.00	O. Ulbrich Stationery	"
. 29.28	27, M. Riter Repairing boilers	June
76.13	M. Riter Repairing boilers	"
. 84.65	M. Riter Repairing boilers	4.6
2.00	M. Riter Flue ends	4.
. 46.14	M. Riter Repairing boilers	"
. 11.61	M. Riter Repairing boilers	
. 14.20	M. Riter Repairing boilers	4.6
. 34.50	Miller Bros Wagon repairs	"
20.75	Miller Bros Wagon repairs	4.6
	Beals & Brown Sundries	
514.20	Collignon & Grimard . Corporation cocks	66
. 3,208.67	C. H. Donaldson, Cash'r. Pay roll for June	66
4.00	18, The Courier Co Courier	July
. 10.50	W. H. Edson Soap	"
. 2.85	Weed & Co Sundries	"
82	M. Riter Repairing	
. 291.19	M. Riter Repairing	64
6,428.63	E. L. Hedstrom Coal	• 6
50.00	C. H. Donaldson, Cash'r. Postage and incidentals.	4.6
. 12,293.91	25, J. J. McWilliams Coal	July
33.45	Becker & Wickser Supplies	
. 169.07	Buff. Lubricating Oil Co. Oil	46
25.28	J. H. Ruckel & Co Supplies	6.6
11.40	A. H. Brown Sundries	66
38.75	James D. Warren's Sons. Printing	• 6
	U. S. Electric Light and	66
. 22.20	Power Co Sundries	
. 9.60	Hardwicke & Ware Vise	
16 67	H H Baker & Co. Supplies	4.6

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	•	
July 25	, J. H. Ruckel & Co Supplies	\$ 93.92
"	P. B. McNaughton Paving	98.24
• •	J. J. McWilliams Coal	3,034.13
August 1	, E. L. Hedstrom Coal	3,520.78
. "	C. H. Donaldson, Cash'r. Pay roll	2,874 15
"	C. H. Donaldson, Cash'r. P. O. stamps	50.00
August 29	o, Volker & Felthousen	
	Mfg. Co Sundries	8.80
"	J. Lyth & Son Pipe	1.50
"	Felthousen & Russell . Supplies	8.45
"	A. H. Brown Sundries	5.70
"	W. H. Edson Soap	9.00
	Buff. Lubricating Oil Co. Oil	73.49
	James Coyle Wheels	19.75
	Goodyear Rubber Co Supplies	13.50
4.6	H. Diehl Rent	100.00
4.6	Hardwicke & Ware Supplies	1.60
"	Goodyear Rubber Co Supplies	6.35
"	R. Dunbar & Son Repairs	9.10
4.6	Irlbacker & Davis Sundries	17.72
	Felthousen & Whittet . Sundries	17.10
"	John T. Rees Pay roll	3,550.05
Sept. 6	6, The Courier Co Directory	9.00
46	Holly Mfg. Co Supplies	45.42
"	The Courier Co Advertising	6.05
"	Hammond & Guild Repairs	1.50
Sept. 12	, A. H. Brown Sundries	10.68
• • •	Fowler & Sons Sundries	1.52
"	S. Somerville & Son Veterinary	17.25
4.6	J. H. Ruckel & Son Supplies	38.30
"	Hardwicke & Ware Hardware	1 70

	THE BUFFALO CITY WATER WORKS.	65
Sept.	12. J. D. Warren's Sons Printing	\$ 51.00
44	Weed & Co Hardware	2.79
• 6	C. J. Heinold Groceries	121.24
	Buff. Sewer Pipe Co Pipe	56.81
	Beals & Brown Files	2.74
"	Felthousen & Whittet . Sundries	14.00
	J. F. Schoellkopf's Sons. Tan-bark	1.00
	Urban & Co Feed	2.40
. 6	Banner Milling Co Feed	2.55
"	C. H. Donaldson, Cash'r. P. O. stamps	50.00
Sept.	19, Becker & Wickser Sundries	33-59
44	Becker & Wickser Sundries	55.60
	Eng. News Publishing	
	Co Subscription	5.00
Sept.	26, C. H. Donaldson, Cash'r. Pay roll	3,149.23
Oct.	3, W. H. Edson Soap	.9. 0 0
Oct.	10, U. S. Electric-Light Co. Sundries	6.08
	U. S. Electric-Light Co. Supplies	6.00
	Felthousen & Whittet . Waste	55.39
"	Walbridge & Co Scoops	11.00
	Goodyear Rubber Co Supplies	6.80
"	Laycock Lumber Co Lumber	79.17
Oct.		3,016.88
"	Scoville Mfg. Co Supplies	75.00
Oct.	31, Farrar & Treff s Sundries	110.33
"	Farrar & Treff.s Sundries	61.94
4.6	Farrar & Treffts Sundries	55.84
"	Star Oil Co Oil	54.78
. 6	Star Oil Co Oil	334.58
"	Star Oil Co Oil	361.22
	Enterprise Oil Co. Sundries	52 AT

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Oct.	31,	Enterprise Oil Co Supplies	\$ 12.00
"		H. H. Baker & Co Supplies	51.03
"		Matthews, Northrup &	
		Co Supplies	52.00
"		Matthews, Northrup &	
		Co Supplies	180.00
66		W. H. Edson Soap	9.00
4.6		-	3, 144. 52
Nov.	14,	J. J. McWilliams Coal	-
"	•,	J. J. McWilliams Coal	
"		C. H. Donaldson, Cash'r. P. O. stamps	50.00
4.		W. H. Keeler Stamp	5.00
		Goodyear Rubber Co Sundries	115.87
		U. S. Electric Light and	<i>.</i>
		Power Co Supplies	56.75
44		W. H. Edson Soap	9.00
"		Beals & Brown Sundries	4.33
"		J. J. McWilliams Coal	13.20
		Walbridge & Co Sundries	153.70
Nov.	21,	Star Oil Co Oil	140.87
"		Times Printing Co Supplies	88.75
"		Weed & Co Sundries	8.08
		E. L. Hedstrom Coal	4,206.09
"		Farrar & Treffts Sundries	161.88
		J. C. Post Glass	7.02
4.		J. H. Ruckel & Co Supplies	37.81
Nov.	28,	· · · · · · · · · · · · · · · · · · ·	3,109.46
"	,	A. L. Barber Sundries	8.oc
		A. L. Barber Sundries	5.40
"		A. L. Barber Sundries	13.00
		F C Schottin Portfolio	3.00

Nov. 28.	Swift & Stambach Gasoline	. \$ 4.05
"	C. Geiser Washing	. 3.60
* *	L. Brechtel Washing	. 3.75
• •	Felthousen & Whittet Waste	. 9.50
••	Farrar & Treffts Sundries	. 648.28
4.6	M. Riter Labor	. 17.47
	M. Riter Labor	. 6.80
"	M. Riter Labor	. 89.55
	Adams & White Stationery	. 34.63
Dec. 12,	Felthousen & Whittet Packing	. 7.13
• 6	J. D. Warren's Sons Supplies	. 45.25
••	C. J. Heinold Feed	. 78.28
4.6	Scatcherd & Son Lumber	. 1.80
	Weed & Co Supplies	. 4.18
44	Walbridge & Co Nails	. 17.70
• •	C. E. Brinkworth Sundries	. 3.25
	D. J. Stickney Coal	. 4.00
4.6	Hardwicke & Ware Supplies	. 2.25
• •	Becker & Wickser Sundries	. 52.85
• •	J. J. McWilliams Coal	. 9,004.22
. 46	E. L. Hedstrom Coal	. 1,381.88
Dec. 19,	Machwirth Bros Supplies	. 4.45
46	C. E. Brinkworth Stamps	. 6.00
• •	Bickford & Francis Repairing	
. "	Star Oil Co Oil	137-49
• •	Farrar & Trefts Repairs	. 93.30
Dec. 23,	Adams & White Stationery	. 2.58
4.6	Scheeler & Sons Baskets	. 20.00
44	Powell & Plimpton	. 2.65
4.6	Brady & Maltby Stone	. 5.6 6 .
66	James Boland Repairs	. 180.75,

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Dec.	23, J. H. Ruckel & Co	Sundries	\$ 135.96
Dec.	28, J. T. Rees, Registrar	P. O. stamps	25.00
"	J. T. Rees, Registrar	Pay roll	3,155.05
46	J. E. Barnard	Gas bills	519.45
		\$1	27,065.25
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SERVICES.

There were inserted three thousand and thirty taps during the year.

The total number of services in the city, January 1, 1888, is twenty-nine thousand four hundred and sixty-seven.

The following table shows the classification of the water consumers, viz.:

CLASSIFICATION OF WATER CONSUMERS.

Acid works	2
Alms-house	1
Aquariums	9
Ashery	1
Armories	· 1
Arsenals	1
Asylums	12
Bakeries.	87
Banks	18
Barber shops	158
Baths (Turkish and Russian)	5
Bath-tubs	5,224
Boarding-houses	168
Bottle-washers	7
Bowling-alleys	2

THE BUFFALO CITY WATER WORKS.	69
Breweries	2 I
Brick-yards	7
Canal stables	5
Chemical houses (Fire Department)	4
Churches	57
City and County Hall	I
Coal-yards	15
Confectioneries	I I 2
Convents	4
Crematory	I
Custom House	1
Distilleries	2
Drinking-fountains	9
Driving park	I
Dwellings (supplying 36,275 families)	,226
Dyeing establishments	8
Engines (gas)	80
Erie County Prison Buildings	2
Fish markets	3
Forts	1
Foundries	13
Fountains	13
Gas-works	3
Gardens (vegetable)	14
Grain elevators	11
Grape-sugar works	1
Green-houses	42
Halls	14
Herdic-coach stables	I
Hook-and-ladder truck-houses (Fire Department)	5
Horse hydrants	

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		Т	HE	Βυ	FF.	ALO	C	Сіт	Y	W.	AT:	ER	V	Vo	RK	s.					71
Resta	urants																				25
Roon	ns and o	:lub-h	ous	es .																	5 2
Saloo	ns													,							1,628
Shop	S																				99
- Slaug	hter-ho	uses .																			73
	factorie																				4
Stabl	es (priv	ate).																			3,274
Starc	h factor	ies .																			2
Stean	n fi r e- e r	gine	hou	ses.																	τ8
Store	s																				2,235
Stree	t-car ba	rns .																			5
Stree	t washe	rs and	l spi	rink	lei	rs.															6,587
Sumn	ner-garo	lens .																			4
Swim	ming-so	hools	.		٠.																. 2
Tann	eries .																				11
Thea	tres .																			,•	10
Tuml	bler-was	hers .																			10
Urina	als																				757
Ware	houses					٠	•	٠	•												I 2
Wate	r-closet	s															•				11,935
Т	he follo	owing	sh	ow	s	the	v	alı	ıe	of	,	wa	tei	: 8	at	0	rdi	na	nc	ce	prices
furnis	shed to	the o	city,	, fo	or	wh	icł	ı v	ve	ar	e	all	OW	ed	Ιy	/ea	ırly	/ I	bу	tŀ	ne city
\$100,	,000.	As w	vill	be	St	en	b	y	re	caj	oit	ula	tic	ac.	,	sa	mé		ເກາ	ou	nts to
\$131,	135.20	:																		•	
					FI	RE	D	EP/	٩R	TM	EN	т.									
No.	1 Stea	mer l	ous	е.											1	2	5.8	80			
	2	"	•												•		2.				
"	3																3.				
	•																-				
44	4	4.6	•													2	0.0	00			

No. I Steamer house \$22.80 " 7 " " " 20.00 " 8 " " 22.60 " 10 " 220.00 " 11 " 28.00 " 12 " 17.00 " 13 " 19.20 " 14 " 27.80 " 15 " 25.00 " 16 " 21.80 " 17 " 21.80 " 18 " 22.80 No. I Chemical house 19.00 " 2 " 23.00 " 3 " 24.00 " 4 " 23.00 No. I Hook-and-ladder house 111.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 PARKS. Prospect Park \$25.00 Lafayette " 100.00 Johnson " 50.00 Day's " 50.00	72			NINETE		- 			 . •			
## 8 ## 20.00 ## 9 ## 29.60 ## 10 ## 20.00 ## 11 ## 28.00 ## 12 ## 17.00 ## 13 ## 19.20 ## 14 ## 27.80 ## 15 ## 25.00 ## 16 ## 21.00 ## 17 ## 21.80 ## 18 ## 22.80 No. 1 Chemical house ## 19.00 ## 2 ## 23.00 ## 3 ## 24.00 ## 4 ## ## 23.00 No. 1 Hook-and-ladder house ## 11.00 ## 2 ## 20.80 ## 3 ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## Headquarters ## 22.80 ## 29.00 ## A Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 4 Included in Steamer No. 11. ## 5 Hook-and-ladder house ## 19.00 ## 19.00 ## 10.00 ## 1	No.	I	Steamer	house							\$ 22.80	
" 10 " " " 20.00 " 11 " " 28.00 " 12 " " 17.00 " 13 " " 19.20 " 14 " " 27.80 " 15 " 25.00 " 16 " 21.00 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park 50.00 Lafayette " 100.00 Johnson " 50.00	"	7	4.6	"						•	20.00	
" 10 " " 20.00 " 11 " " 28.00 " 12 " " 17.00 " 13 " 19.20 " 14 " 27.80 " 15 " 25.00 " 16 " 21.00 " 17 " 21.80 " 18 " 22.80 No. 1 Chemical house 19.00 " 2 " 23.00 " 3 " 24.00 " 4 " 23.00 No. 1 Hook-and-ladder house 111.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	8	"	"			•				20.00	
" 11 " " 28.00 " 12 " " 17.00 " 13 " " 19.20 " 14 " " 27.80 " 15 " " 25.00 " 16 " " 21.80 " 17 " " 21.80 " 18 " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 *** **PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	9	4.6	"							29.6 0	
" 12 " " 17.00 " 13 " 19.20 " 14 " 27.80 " 15 " " 25.00 " 16 " " 21.80 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	10	"	"							20.00	
" 13 " " 19.20 " 14 " " 27.80 " 15 " " 25.00 " 16 " " 21.80 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 111.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	11	"	• 6							28.00	
" 14 " " 27.80 " 15 " " 25.00 " 16 " " 21.00 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	12	4.6	"							17.00	
" 15 " " 25.00 " 16 " " 21.00 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 *** **PARKS.** Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	46	13	"	4.					 		19.20	
" 16 " " 21.00 " 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	14	"	**					 •		27.80	
" 17 " " 21.80 " 18 " " 22.80 No. 1 Chemical house	"	15	**	44							25.00	
" 18 " " 22.80 No. 1 Chemical house		16	"	"							21.00	
No. 1 Chemical house 19.00 " 2 " " 23.00 " 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	17	4.6	. 44					 		21.80	
" 2 " " " 23.00 " 3 " " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	18	"	"					 		22.80	
" 3 " " 24.00 " 4 " " 23.00 No. 1 Hook-and-ladder house 11.00 " 2 " " " 20.80 " 3 " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette " 100.00 Johnson " 50.00	No.	1	Chemical	house							19.00	
" 4 " " 23.00 No. 1 Hook-and-ladder house . 11.00 " 2 " " " 20.80 " 3 " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house . 19.00 Headquarters . 22.80 " barn . 29.00 PARKS. Prospect Park . \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	2	"	"							23.00	
" 4 "" "	"	3	"	"							24.00	
" 2 " " " " 19.00 " 3 " " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house . 19.00 Headquarters . 22.80 " barn . 29.00 PARKS. Prospect Park . \$ 25.00 Lafayette " 100.00 Johnson " 50.00	"	4	"	"							23.00	
" 3 " " " 19.00 " 4 Included in Steamer No. 11. " 5 Hook-and-ladder house . 19.00 Headquarters . 22.80 " barn . 29.00 PARKS. Prospect Park . \$ 25.00 Lafayette " 100.00 Johnson " 50.00	No.	1	Hook-an	d-ladde	r hou	se .					11.00	
" 4 Included in Steamer No. 11. " 5 Hook-and-ladder house	"	2	"	"	•	"					20.80	
" 5 Hook-and-ladder house 19.00 Headquarters 22.80 " barn 29.00 PARKS. Prospect Park \$ 25.00 Lafayette 100.00 Johnson " 50.00	"	3	"	"	•	.					19.00	
Headquarters	"	4	Included	in Ste	amer	No.	. 11					
" barn	"	5	Hook-an	d-ladde	r hou	se .					19.00	
PARKS. Prospect Park			Headqua	rters .							22.80	
PARKS. Prospect Park			"		barn						29.00	
Prospect Park										•		\$617.70
Lafayette " 100.00 Johnson " 50.00						P	ARK	s.				
Johnson "	Pro	spe c	t Park .								\$ 25.00	
•	Lafa	ayet	te '' .								100.00	
Day's ' 50.00	Joh	nsor	ı "								50.00	
	Day	's	• • • •								50.00	

POLICE DEPARTMENT.

No.	I	Police	Station,	includ	ing	Hea	ı d qua	arter	s.	\$ 330.00
44	2	"	46							82.00
44	3		• •							91.80
44	4	"	**							64.40
4.6	5	"	46							81.00
66	6	"	"							83.00
44	7	4.6	44							106.80
44	8	46	44							92.90
4.6	9	44	"							52.90
"	10	44	4.6							52.80
Sub	. I	44	4.6							58.70
										\$1,096.30
					sci	нооі	s.			
No.	I.									\$ 47.50
"	2.									60.50
46	3.									30.0 0
44	4.									67.8o
"	5.									38.0 0
4.6	6.									88.00
"	7.									35.00
"	8.				•					232.40
46	9.	No v	vater.							
44	10.				•					111.00
"	II.								•	30.20
"	I 2.	\$ 78;	Primary	y, \$172	•				•	250.00
	13.									187.50
"	14.				•				•	85.00
"	15.				•					242.00

NINETEENTH ANNUAL REPORT OF 74 No. 17. \$ 64.00 " 18. \$93.90; Primary, \$25 118.90 " 19. \$to2.40; annex, \$31.40. 133.80 \$114.50; Primary, \$14 128.50 No water. " 21. " 22. 12.00 " 23. No water. " 24. 35.00 " 25. 39.00 44.70 " 27. No water. " 28. " 29. 30. " 31. • 399.00 44 32. Two buildings. Old, \$63; new, \$65. 128.00 55.25 42.40 " 35. 131.50 \$106.40; two annexes, \$12 118.40 **"** 37· 257.50 \$112; annex, \$5.50 117.50 133.60 " 40. 221.00 162.50 228.00 \$4,170.95 SUNDRY BUILDINGS, ETC. 25.20

5,000.00

Buffalo Insane Asylum

Markets: \$ 1,500.00 Elk street. \$ 1,500.00 Washington street 1,000.00 Clinton street 500.00	\$8,025.25
Nine drinking-fountains, \$100 each 900.00	
Twenty-two horse drinking - fountains,	
\$100 each \$ 2,200.00	
2,140 fire hydrants, \$50 each 107,000.00	
Sixteen fire reservoirs, \$50 each 800.00	
Seventeen free hydrants, \$300 each 5,100.00	\$116,000.00
RECAPITULATION.	
Fire Department	
Public Parks	
Police Department 1,096.30	
Public Schools	
Public Buildings 8,025.25	
Fire Hydrants, Drinking-Fountains, etc. 116,000.00	
-	\$131,135.20

The importance of providing more adequate office accommodation is fully appreciated by you, and, to carry out the recommendations contained in your report, I would suggest that steps be taken to carry out the plan as approved of and submitted to the City and County Hall Commissioners during the early part of the year. If these changes, as shown on plan submitted, are made, it will greatly increase our office accommodation, both for employees and our consumers.

Respectfully submitted,

JOHN T. REES,

Registrar.



DISTRIBUTION

OF THE

WATER DEPARTMENT

FOR THE

YEAR 1887.

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FIRE HYDRANTS.

The number of Fire Hydrants placed during the year on new line of mains was 177, of which ninety-one was on the reservoir supply, and eighty-six on the high service supply, making the total number in the city, December 31, 1887, 2,140. Following schedule gives location of hydrants set during 1887:

Location.	System.	Sewered.
Arkansas street, southeast corner of Sherwood street	H.	
"A" street, southwest corner of Mills street	"	
Ashland avenue, southwest corner of Highland avenue.	. "	s:
Barton street, northwest corner of Albany street	H.	S.
Barthal street, southwest corner of Genesee street	"	S.
Broadway, opposite Green street	R.	
Broadway, 360 feet east of Green street	"	
Broadway, 732 feet east of Green street		
Baynes street, 250 feet south of Bouck avenue	H.	
Babcock street, between Perry and Seneca streets	R.	s.
Babcock street, opposite Wescott street	"	S.
Benzinger street, center of block, between Lovejoy and	i	
Ludington streets	"	
Breckenridge street, 190 feet west of Niagara street	"	
Berlin street, southwest corner of Northampton	H.	
Churchill street, 637 feet north of Amherst street	R.	
Churchill street, 525 feet south of Austin street	"	
Churchill street, 200 feet south of Austin street	" "	
Central avenue, 425 feet south of Lovejoy street	"	
Central avenue, southeast corner of Lovejoy street	"	
Chestnut street, southwest corner of North Division	"	
Church street, southeast corner of Delaware avenue	"	
Church street, southwest corner of Delaware avenue	""	

Location.	System.	Sewered.
Clinton avenue, southeast corner of Richmond avenue.	H.	
Clinton avenue, southwest corner of Bidwell parkway.	**	S.
Clinton avenue, center of block, between Bidwell park-		
way and West Chapin parkway	**	
Clinton avenue, 340 feet east of East Chapin parkway.	**	- 1
"C" street, northeast corner of Fillmore avenue	44	S.
"C" street, northwest corner of Mills street	**	
Cayuga street, northwest corner of Grey street	**	
Deshler street, southwest corner of Broadway	R.	- 1
Deshler street, center of block, between Broadway and		
Grand street	"	
Deshler street, southwest corner of Grand street	66	
Dodge street, 560 feet west of Jefferson street	H.	
Dodge street, 400 feet east of Masten street	**	
Delaware avenue, southeast corner of Virginia street .	. 11	W =
Delaware avenue, southeast corner of Edward street .	**	
Delaware avenue, center of block, between Edward and		
Tupper streets	**	
Delaware avenue, southeast corner of Tupper street	44	
Delaware avenue, opposite Tracey street	66	
Delaware avenue, northwest corner of Johnson place .	**	
Delaware avenue, northwest corner of Carey street	R.	
Delaware avenue, center of block, between Huron and		
Mohawk streets	44	
Delaware avenue, northeast corner of Mohawk street .	11	40 7
Delaware avenue, northeast corner of Fillmore driveway		
Dodge street, southwest corner of Gerhard street	H.	
Dodge street, southwest corner of Berlin street	**	
Dodge street, southwest corner of Timon street		
Dodge street, southwest corner of Roehrer avenue	**	

Location.	System.	Sewered.
Dodge street, southwest corner of Wohlers avenue	H.	
Dewitt street, southwest corner of Auburn avenue	R.	
Dewitt street, opposite Helen street	"	
Dewitt street, opposite Annie place	"	
Dewitt street, opposite Pooley place	. "	
Delavan avenue, southeast corner of Chapin parkway.	H.	
Delavan avenue, southwest corner of Delaware avenue	. "	
Ellicott street, southwest corner of Northampton street	. Н.	
Ellicott street, southwest corner of Seneca street	R.	
Ellicott street, northwest corner of Exchange street	"	
Eighteenth street, southwest corner of Hampshire street	. Н.	
Fifteenth street, southwest corner of Hampshire street.	"	
Fillmore avenue, 420 feet north of Broadway	R.	
Fillmore avenue, 832 feet north of Broadway	46	
Fillmore avenue, 400 feet south of Sycamore street	"	
Ferguson street, southeast corner of Herkimer street .	H.	S.
Fourth street, northeast corner of Virginia street	R.	S.
Fourth street, center of block, between Virginia and	i	
Maryland streets	R.	S.
Gorham street, northwest corner of Elk street	R.	
Gorham street, southwest corner of Perry street	"	
Genesee street, southwest corner of Moselle street	H.	
Genesee street, southwest corner of Bailey avenue	"	
Gerhard street, southwest corner of Northampton	"	
Gull street, 320 feet west of Niagara street	R.	
Grant street, southwest corner of Bouck avenue	H.	S.
Grant street, northwest corner of Auburn avenue	"	"
Guilford street, 450 feet north of Broadway	R.	"
Guilford street, 530 feet south of Sycamore street	"	66
Guilford street, 360 feet north of Genesee	Н.	

Location.	System,	Sewered.
Guilford street, 392 feet south of Best street	H.	
Northampton street, southwest corner of West Parade		
avenue	3.6	
Northampton street, between east and west Humboldt		
driveway	**	
Northampton street, between Humboldt driveway and		
Avenue "A"	11	
Northampton street, southwest corner of Avenue "A".	Xi-	
Hibbard street, northwest corner of Albany street	**	S.
Howard avenue, southwest corner of Highland avenue.	**	- 66
Hoyt street, northwest corner of Breckenridge street .	44	64
Hoyt street, northwest corner of Auburn avenue	H.	S.
Harlow place, southwest corner of Alexander place	15	
Hickory street, southwest corner of North Division street.	R.	
Jersey street, southwest corner of Fourth street	R.	
Jones street, southwest corner of Lyman street	**	
Keifer street, southwest corner of Genesee street	H.	
Kingsley street, southeast corner of Jefferson street	11	S.
Kingsley street, 1250 feet east of Jefferson street	46	
Kosciuszko street, northwest corner of Broadway	R.	
Kosciuszko street, 450 feet north of Broadway	11	
Kosciuszko street, southwest corner of Stanislaus street.	**	
Latour street, southeast corner of Genesee street	H.	- 2
Lyman street, southeast corner of Metcalf street	R.	-
Lovejoy street, southwest corner of Wilson street.	R.	
Masten street, southwest corner of Puffer street	H.	S.
Military road, opposite Clay street		-
Military road, center of block, between Clay street and		
Glor street		
Military road, center of block, between Glor and Grant		
streets	44	

Location.	System.	Sewered.
Military road, northeast corner of Grant street	R.	
Mllitary road, southeast corner of Hertel avenue	- 11	
Military road, southeast corner of Idaho street	24.	
Maurice street, 275 feet south of Elk street	**	
Maurice street, northwest corner of Prenatt street	44	
Mohr street, southwest corner of Broadway	44	
Mohr street, northwest corner of Grimes street	46	
North Division street, center of block, between Michigan	1	
and Chestnut streets	44	
North Division street, center of block, between Chest		
nut and Pine streets	44	
North Division street, center of block, between Pine and	d	
Cedar streets	44	
North Division street, center of block, between Ceda	r	
and Hickory streets		
North Division street, center of block, between Hickory	7	
and Spring streets	**	
North Division street, center of block, between Spring	66	
and Jefferson streets	***	
North Division street, southwest corner of Jefferson street.	**	
North Parade avenue, northeast corner of Avenue "A".	Н.	
Oakland street, southwest corner of Genesee street	44	
Phillips street, southwest corner of Genesee street	H.	
Pine street, southwest corner of North Division street .		
Purdy street, southwest corner of Harlow place	H.	
Pink street, center of block, between Montgomery and	i	
and Smith streets	R.	
Roehrer street, southwest corner of Northampton street.		
Roetzer street, southwest corner of Genesee street	***	S.
Rohr street, southwest corner of Genesee street		

Location. System, Sewere	d.
Riley street, 470 feet east of Masten street H.	
Riley street, northwest corner of Jefferson street "	
Riley street, 480 feet west of Jefferson street "	
Riley street, 500 feet east of Jefferson street "	
Reed street, 480 feet north of Broadway R.	
Reed street, 985 feet north of Broadway	
Reed street, 540 feet south of Sycamore street , "	
School street, southwest corner of Plymouth avenue H.	
Sweeney street, center of block, between Genesee and	
Best streets	
Seymour street, northeast corner of Bond street R. S.	
Seneca street, opposite Seneca place	
Seneca street, opposite Fitch alley	
Seneca street, southwest corner of Chicago street "	
Seneca street, 250 feet east of Chicago street "	
Seneca street, 586 feet east of Chicago street	
Seneca street, southwest corner of Louisiana street "	
Spring street, southwest corner of North Division street. "	
Timon street, southwest corner of Northampton street. H. S.	
Thomas street, northeast corner of Metcalf street R.	
Townsend street, 300 feet north of Lovejoy street "	
Townsend street, 300 feet south of Broadway "	
Tonawanda street, northeast corner of Niagara street . "	
Tonawanda street, 300 feet north of Niagara street "	
Tonawanda street, 576 feet north of Niagara street "	
Tonawanda street, 960 feet north of Niagara street "	
Tonawanda street, 1250 feet north of Niagara street "	
Tonawanda street, 1575 feet north of Niagara street "	
Tonawanda street, 510 feet south of Amherst street "	
Tonawanda street, 270 feet south of Amherst street "	

Location.	System	. Sewered.
Towpath, at pumping-house	Н.	
Vary street, center of block, between Jefferson and	Ĺ	
Spring streets	R.	
Wasmuth street, southwest corner of Genesce street	Н.	s.
Wohlers avenue, southwest corner of Northampton	• 6	
Walden avenue, northwest corner of Binkman street .	4.6	
Walden avenue, northwest corner of Summer street	4.6	
Walden avenue, opposite Hoffman avenue	• •	
Walden avenue, opposite Rhein street		
Walden avenue, opposite Wex street	• 6	
Walden avenue, 500 feet east of Wex street		
Walden avenue, 1370 feet west of city line	"	
Walden avenue, 1000 feet west of city line	"	
Walden avenue, 740 feet west of city line	"	
Walden avenue, 200 feet west of city line	"	
Wilson street, 528 feet north of Broadway	R.	
Wilson street, 534 feet south of Sycamore street	, ii	
Wilson street, northwest corner of Sycamore street	H.	
Wilson street, 420 feet north of Sycamore street	6.6	
Wilson street, 815 feet north of Sycamore street	••	
Wilson street, 390 feet south of Genesee street	. "	
Wilson street, southwest corner of Genesee street	. ••	
Webster street, southwest corner of Breckenridge street	t. "	
R. Reservoir supply		91
H. High service		86
Hydrants set in previous years	. –	— 177 1,963
Total hydrants in city December 31, 1887		2, 140

FIRE RESERVOIRS.

Number.

Location.

Main street, in front of Spaulding's Exchange
Main street, in front of Lafayette park
Main street, in front of churches
Main street, corner of Exchange
Main street, corner of Seneca
Main street, corner of Swan
Main street, corner of North Division
Main street, corner of Eagle
Main street, corner of Genesee
Seneca street, corner of Chicago
Goodell street, corner of Washington
Niagara square, junction of Genesee and Court ·
Niagara street, corner of Mohawk
Eagle street, corner of Genesee
Broadway, in front of Arsenal
Clinton street, corner of Union

Total
•
DRINKING FOUNTAINS.
Location. Number.
Delaware avenue, corner of Court
Main street, corner of Seneca
Main street, corner of Erie
Main street, opposite Court
Main street, corner of Huron
Michigan street, corner of Seneca
Michigan street, corner of Broadway

THE BUFFALO CITY WATER WORKS.	87
Location,	Number.
Michigan street, corner of Genesee	. т
Washington Market	. 1
Total	. 9
HORSE FOUNTAINS.	
Location.	Number.
Broadway, in front of Arsenal	. 1
Elk street, between East and West Market	. 1
Elk street, front of Atlas Refining Company	
Elk street, corner of Hamburgh	. 1
Erie street, between Seneca and Terrace	. 1
Forest avenue, opposite No. 54	
Genesee street, between Lower and Upper Terrace	. 1
Genesee street, corner of Ellicott	. і
High street, corner of Genesee	
Main street, corner of Ferry	. т
Main street, corner of Steele	. 1
Maryland street, corner of Fifth	. 1
Niagara street, between Eagle and Franklin	
Niagara street, corner of Prospect avenue	. 1
Niagara street, corner of Clinton avenue	
Niagara street, corner of Amherst (old style)	
Niagara street, corner of Austin (old style)	. 1
Niagara street, corner of Hertel avenue	. I
Swan street, at junction with Seneca	-
West avenue, between York street and Porter avenue	
York street, corner of Thirteenth	
Best street, north side, 100 feet west of Jefferson	. 1 . 1
Total	. 22

FREE HYDRANTS.

Location.	Number.
Chicago street, northwest corner of Mackinaw	. 1
Chicago street, southeast corner of Elk	. I
Chicago street, southeast corner of Fulton	. 1
Elk street, northeast corner of Columbia	. 1
Elk street, southeast corner of Moore	I
Elk street, southeast corner of Hamburgh	. 1
Exchange street, north side, between Jefferson and Hamburgh	. і
Exchange street, northwest corner of Heacock	1
Fifth street, northwest corner of Georgia	. 1
Fourth street, northeast corner of Carolina	I
Louisiana street, east side, between Ohio and South	. I
Louisiana street, northeast corner of Sandusky	. 1
Mackinaw street, southeast corner of Tennessee	. 1
Mackinaw street, southwest corner of Vandalia	. r
Perry street, southwest corner of Illinois	. I
Perry street, southeast corner of Hamburgh	. т
Perry street, southwest corner of Hayward	
Total	. 17

LOCATION OF VALVES SET IN 1887.

Arkansas street, s. w. c. of Grant st., 6 inch H., 46 s. and 48 w. of hyd. on n. e. c.

Avenue A, n. w. c. of Genesee st., 16 inch H., 181/2 e. of n. w. c.

Avenue A, n. w. c. of North Parade ave., 16 inch H., 12 n. and 45½ w. of hyd. on n. e. c.

Alvin street, s. e. c. of Durenberger, 4 inch H., 19½ n. and 2 w. of s. e. c.

Albany street, s. w. c. of Hampshire, 6 inch H., 37 n. and 22 w. of s. w. c. of Fourteenth st.

Best street, s. w. c. of Avenue A, 8 inch H., 23 n. and 20 e. of s. w. c.

Best street, s. w. c. of Avenue A, 8 inch H., 23 n. and 10 e. of s. w. c.

Broadway, n. e. c. of Bailey ave., 12 inch R., 38 s. of n. e. c.

Broadway, e. of Bailey ave., 12 inch R., 35 s. and 879 e. of n. e. c. of Bailey ave.

Broadway, near end of pipe, 12 inch R., 3 n. and 82 w. of last hyd.

Broadway, on First Branch e. of Bailey ave., st. no name, 6 inch R., 35 s. and 390 e. of n. e. c. of Bailey ave.

Broadway, on Second Branch e. of Bailey ave., st. no name, 6 inch R., 35 s. and 792 e. of n. e. c. of Bailey ave.

Broadway, for Green st. and hyd., 6 inch R, $5\frac{1}{2}$ e. and 1 n. of hyd. Broadway, for hyd., bet. Green st. and Garfield st., 6 inch R., 5 e. and 2 n. of hyd.

Broadway, for hyd., at end of pipe, 6 inch R., 5 e. and 1 n. of hyd. Baynes street, s. w. c. of Bouck ave., 6 inch H., 10 e. and 19½ s. of hyd. on s. w. c.

Babcock street, n. w. c. of Perry st., 10 inch R., 13 e. and 70 n. of hyd.

Babcock street, s. w. c. of Seneca st., 10 inch R., 9 e. and 4 s. of hyd.

Babcock street, center of Seneca st., 10 inch R., 7 e. and 29 n. of hyd. Bremen street, n. w. c. of Vermont, 6 inch H., 22 e. and 7½ s. of n. w. c.

Benzinger street, s. e. c. of Lovejoy st., 6 inch R., 8 w. and 131/2 s. of hyd.

Benzinger street, n. w. c. of Ludington st., 6 inch R., 27 e. and 3 s. of n. w. c.

Barton street, n. w. c. of California, 6 inch H., 27 e. and 3½ n. of n. w. c.

Breckenridge street, n. w. c. of Niagara st., 6 inch R., 21 s. of n. w. c. West Bennett street, center of William st., 4 inch R., 28 e. and 37 n. of

West Bennett street, center of Clinton st., 4 inch R., 26 e. and 361/2 s. of n. w. c.

Cedar street, center of North Division, 6 inch R., 41 w. and 30 n. of s. e. c.

Cedar street, s. w. c. of North Division, 6 inch R., 41 w. and 14 n. of s. e. c.

Carroll street, n. e. c. of Washington, 6 inch R., 24 s. of n. e. c.

Carroll street, n. w. c. of Ellicott st., 6 inch R., 17 s. and 18 e. of n. w. c.

Carroll street, n. e. c. of Ellicott st., 6 inch R., 17 s. and 26 e. of n. w. c.

Carroll street, n. w. c. of Wells st., 6 inch R., 17 s. of n. w. c.

Carroll street, n. e. c. of Wells st., 6 inch R., 16 s. of n. e. c.

Carroll street, n. w. c. of Michigan, 6 inch R., 20 s. of n. w. c.

Churchill street, n. w. c. of Amherst st., 4 inch R., 10 e. and 48 s. of hyd.

Churchill street, for Cutler's building, 4 inch R., 90½ s. and 15½ e. of n. w. c. of building.

- Churchill street, bet. Amherst and Austin sts., 4 inch R., 8 w. and 101 1/2 s. of hyd. in front of No. 81.
- Central avenue, s. e. c. of Lovejoy st., 6 inch R., 8 n. and 7 w. of hyd. on s. e. c.
- Chestnut street, s. w. c. of North Division, 6 inch R., 15 e. and 2 s. of s. w. c.
- Cayuga street, n. w. c. of Grey st., 6 inch H., 23½ s. and 3 w. of n. w. c.
- Church street, s. e. c. of Lower Terrace, 10 inch R., 54 n. and 71 e. of s. w. c.
- Clinton avenue, s. e. c. of Richmond ave., 20 inch H., 11 n. and 6 w. of hyd.
- Clinton avenue, s. e. c. of Bidwell parkway, 20 inch H., 26½ n. and 6 e. of s. e. c.
- Clinton avenue, to hyd. s. e. c. of Richmond ave., 6 inch H., 7½ n. of hyd.
- Clinton avenue, for Double Branch, bet. Richmond and Elmwood aves., 6 inch H., 9 n. and 552 e of hyd. s. e. c. of Richmond ave.
- Clinton avenue, for Double Branch, bet. Richmond ave. and Elmwood ave., 6 inch H., 14 n. and 552 e. of hyd., s. e. c. Richmond ave.
- Clinton avenue, on Double Branch, for Elmwood ave., 6 inch H., 11 e. and 40 s. of n. w. c.
- Clinton avenue, on Double Branch, for Elmwood ave., 6 inch H., 11 e. and 34 s. of n. w. c.
- Clinton avenue, on Double Branch, for Bidwell parkway, 6 inch H., 6 w. and 16 n. of hyd.
- Clinton avenue, on Double Branch, for Bidwell parkway, 6 inch H., 6 w. and 7 n. of hyd.

- Clinton avenue, on Double Branch e. of Bidwell parkway, 6 inch H., 17 w. and 42 n. of s. e. c.
- Clinton avenue, on Double Branch e. of Bidwell parkway, 6 inch H., 17 w. and 32 n. of s. e. c.
 - Clinton avenue, to hyd., bet. East Bidwell parkway and West Chapin parkway, 6 inch H., 4½ n. of hyd.
 - Clinton avenue, to Double Branch, opp. hyd. bet. East Bidwell parkway and West Chapin parkway, 6 inch H., 12½ n. of hyd.
 - Clinton avenue, to Double Branch, for West Chapin parkway, 6 inch H., 9 w. and 19 n. of hyd.
 - Clinton avenue, to Double Branch, for West Chapin parkway, 6 inch H., 9 w. and 7 n. of hyd.
 - Center avenue, s. e. c. of East Chapin parkway, 6 inch H., 36 n. and 17 e. of 20 inch valve in East Chapin parkway.
 - East Chapin parkway, on the Y Branch, n. of the 20 inch pipe, 6 inch H., 38 n. and 4 e. of 20 inch valve.
 - East Chapin parkway, s. e. c. of Clinton ave., 20 inch H., 7 w. of s. e. c.
 - Chicago street, center of Seneca st., 6 inch R., 27 e. and 29 n. of s. w. c.
 - Chicago street, for fire reservoir, 6 inch R., 2 s. and 29 w. of n. e. c. of Seneca and Chicago sts.
 - Delavan avenue, n. e. c. of Niagara, 6 inch R., 24 s. and 18 w. of n. e. c.
 - Delavan avenue, n. e. c. of Chapin parkway, 4 inch H., 13 w. and 27 s. of n. e. c.
 - Delavan avenue, s. e. c. of Chapin parkway, 6 inch H., 5 n. of hyd. Delavan avenue, bet. Chapin parkway and Delaware ave., 4 inch H., 234 w. and 15 n. of hyd. on s. w. c. of Delaware st.
 - Delavan avenue, s. w. c. of Delaware, 6 inch H., 6 n. of hyd.

- Delavan avenue, s. e. c. of Delaware, 20 inch H., 21 n. and 6 w. of s. e. c.
- Delavan avenue, bet. Delaware ave. and Linwood ave., for the cemetery, 4 inch H., 26 n. and 222 e. of s. e. c. of Delaware ave.
- Deshler street, center of Broadway, 6 inch R., 56 n. and 22 e. hyd. on n. w. c.
- Deshler street, n. w. c. of Amity st., 6 inch R., 2½ e. and 26 s. of n. w. c.
- Deshler street, s. of the meter, 6 inch R., 5 s. of meter-box.
- Dodge street, n. e. c. of Masten st., 6 inch H., 22 s. of n. e. c.
- Dodge street, s. e. c. of Jefferson st., 6 inch H., 10 n. and 53 e. of hyd. on s. w. c.
- Dodge street, s. e. c. of Berlin st., 6 inch H., 8 n. and 66 e. of hyd. on s. w. c.
- Dodge street, s. e. c. of Roehrer ave., 6 inch H., 8 n. and 58 e. of hyd. on s. w. c.
- Dewitt street, s. w. c. of Auburn ave., 4 inch R., 14 s. and 12 e. of hvd.
- Dewitt street, n. w. c. of Auburn ave., 4 inch R., 10 e. and 54 n. of hyd.
- Dewitt street, s. w. c. of Bouck ave., 4 inch R., 24 e. and 2 n. of s.
- Dewitt street, n. w. c. of Bouck ave., 6 inch R., 23 e. and 5 s. of n. w. c.
- Dewitt street, center of Delavan ave., 6 inch R., 27 e. and 27 s. of n. w. c.
- Dewitt street, center of Delavan ave., 6 inch R., 27 e. and 22 s. of n. w. c.
- Dewitt street, n. w. c. of Clinton ave., 6 inch R., 24 e. of m. w. c.
- Dewitt street, s. w. c. of Bird ave., 6 inch R., 23 e. of s. w. c.

- Dewitt street, n. w. c of Bird ave., 6 inch R., 23 e. of n. w. c.
- Dewitt street, s. w. c. of Forest ave., 6 inch R., 23 e. of s. w. c.
- Delaware avenue, n. w. c. of Church st., 4 inch R., 35 e. and 17 s. of n. w. c.
- Delaware avenue, n. e. c. of Virginia st., 6 inch H., 41 w. and 44 n. of s. e. c.
- Delaware avenue, s. e. c. of Virginia st., 10 inch H., 41 w. and 7 s. of s. e. c.
- Delaware avenue, s. e. c. of Edward st., to inch H., 14 w. and 13 s. of hyd. on s. e. c.
- Delaware avenue, n. of Delaware place, for Buffalo Club House, 4 inch H., 16 w. and 39 s. of hyd. in front of No. 391.
- Delaware avenue, n. e. c. of Tupper st., 10 inch H., 41 w. and 3 n. of n. e. c.
- Delaware avenue, center of Tupper st., bet. 10 inch Holly and 20 inch reservoir, 6 inch, 43 w. and 24 s. of n. e. c.
- Delaware avenue, center of Tupper st., for Tupper st. pipe, w. of 10 inch, 4 inch H., 43 w. and 32 s. of s. e. c.
- Delaware avenue, center of Tupper st., bet. 10 inch Holly and 20 inch reservoir, 6 inch, 42 w. and 43 s. of n. e. c.
- Delaware avenue, s. e. c. of Tupper st., 10 inch H., 39 w. and 4 s. of s. e. c.
- Delaware avenue, n. e. c. of Park place, 10 inch H., 59 e. and 4 n. of n. w. c.
- Delaware avenue, center of Johnson place, 6 inch H., 54 e. and 23 s. of n. w. c.
- Delaware avenue, center of Cary st., 6 inch R., 61 e. and 10 s. of n. w. c.
- Delaware avenue, n. e. c. of Huron st., 10 inch R., 281/2 w. and 3 n. of n. e. c.

- Delaware avenue, s. e. c. of Huron st., 10 inch R., 38½ w. and 4 s. of s. e. c.
- Delaware avenue, n. e. c. of Mohawk, 10 inch R., 42 w. and 4 n. of n. e. c.
- Delaware avenue, center of Mohawk, w. of 10 inch, 6 inch R., 50 w. and 40 s. of n. e. c.
- Delaware avenue, center of Mohawk, e. of 10 inch, 6 inch R., 28 w. and 40 s. of n. e. c.
- Delaware avenue, s. e. c. of Mohawk, 10 inch R., 44 w. and 5 s. of s. e. c.
- Delaware avenue, at Niagara square, 10 inch R., 77 s. and 15 w. of hyd. on n. e. c.
- Ellicott street, n. w. c. of Dodge st., 6 inch H., 43 w. and 2 s. of n. e. c.
- Ellicott street, n. w. c. of Exchange, 10 inch R., 21 e. of n. w. c.
- Elmwood avenue, s. w. c. of Utica st., 6 inch H., 15 e. of s. w. c.
- Eighteenth street, n. e. c. of Massachusetts st., 6 inch H., 21 w. of n. e. c.
- Eighteenth street, s. w. c. of Hampshire, 6 inch H., 19 e. and 2 n. of s. w. c.
- Fillmore avenue, n. w. c. of Broadway, 6 inch R., 19 e. and 3 n. of n. w. c.
- Fillmore avenue, s. w. c. of Sycamore, 6 inch R., 19 e. of s. w. c.
- Fifteenth street, n. w. c. of Massachusetts st., 6 inch H., 31 e. and 9 s. of n. w. c.
- Fifteenth street, s. w. c. of Hampshire st., 6 inch H., 28 e. and 2 s. of s. w. c.
- Ferguson street, n. w. c. of Grant st., 6 inch H., 16 s. of n. w. c.
- Fourth street, s. e. c. of Maryland st., 6 inch R., 241/2 n. of s. e. c.
- Fourteenth street, s. w. c. of Hampshire st., 6 inch H., 26 e. and 19½ n. of s. w. c.

- Fox street, n. w. c. of Broadway, 6 inch R., 33 w. and 3 s. of n. e. c.
- Gay street, s. w. c. of Potter st., 4 inch R., $27\frac{1}{2}$ s. of n. w. c.
- Gay street, n. e. c. of Michigan st., 4 inch R., 15 s. and 23 w. of n. e. c.
- Gorham street, n. w. c. of Elk st., 6 inch R., 8 e. and 10 n. of hyd. on n. w. c.
- Genesee street, s. e. c. of East Parade avenue, 10 inch H., 12½ n. of hyd. on s. e. c.
- Genesee street, s. e. c. of Keifer st., 10 inch H., 27 n. and 8 e. of s. e. c.
- Genesee street, s. e. c. of Wasmuth st., 10 inch H., 27½ n. of s. e. c.
- Genesee street, s. w. c. of Moselle st., 10 inch H., 28 n. and 3 e. of s. w. c.
- Genesee street, s. w. c. of Doat st., 10 inch H., 100 e. and 43 s. of n. w. c. of Nevada st.
- Genesee street, s. w. c. of Phillipp st., 10 inch H. 26 n. of hyd. on s. w. c.
- Genesee street, s. w. c. of Bailey avenue, 10 inch H., 27 n. and 2 w. of s. w. c.
- Gull street, s. w. c. of Niagara street, 4 inch R., 8 n. and 9 e. of s. w. c.
- Grant street, s. w. c. of Bouck avenue, 6 inch H., 15½ e. and 25 s. of hyd.
- Gelston street, n. w. c. of Auburn avenue, 4 inch R., $23\frac{1}{2}$ e. and 12 n. of hyd. on n. w. c.
- Grey street, n. w. c. of Carlton st., 6 inch H., 18 e. of n. w. c.
- Grey street, s. w. c. of High st., 6 inch H., 17 e. of s. w. c.
- Guilford street, n. w. c. of Broadway, 6 inch R., 18½ e. and 2 s. of n. w. c.

- Guilford street, s. w. c. of Sycamore st., 6 inch R., 38 w. and 2 n. of s. e. c.
- Guilford street, n. w. c. of Genesee st., 6 inch H., 2 e. and 72 n. of s. w. c.
- Guilford street, s. w. c. of Best st., 6 inch H., 134 e. and 3½ s. of hyd. on Best st.
- Hampshire street, s. e. c. of Thirteenth st., 6 inch H., 27 n. of s. e. c. Hampshire street, s. e. c. of Sixteenth st., 6 inch H., 24 n. and 10
- w. of s. e. c.
- Hampshire street, s. e. c. of Ferry st., 6 inch H., 180 w. and 61 s. of hyd. corner of Hoyt st.
- Hampshire street, n. e. c. of Grant st., 6 inch H., 53 s. and 8 w. of hyd.
- Hodge street, n. w. c. of Vermont st., 6 inch H., 31 1/2 w. of n. e. c.
- Harlow place, s. e. c. of Purdy st., 6 inch H., 18 n. and 42 e. of hyd.
- Hydraulic street, s. w. c. of Seneca st., 4 inch R., 17 e. and $4\frac{1}{2}$ s. of s. w. c.
- Hickory street, s. w. c. of. North Division st., 6 inch R., 24 e. and 12 n. of s. w. c.
- Jersey street, s. w. c. of Lake View avenue, 6 inch R., 24 n. of s. w. c.
- Jones street, n. w. c. of Lyman st., 6 inch R., 9 e. and 4½ n. of hyd.
- Kail street, n. e. c. of Amherst st., 6 inch R., 13 w. and 24 n. of hvd.
- Kinsgley street, center of Jefferson st., 6 inch R., 34 w. and 32 s. of n. e. c.
- Kosciuszko street, n. w. c. of Broadway, 6 inch R., 8 e. and 2 n. of hyd.
- Kosciuszko street, n. w. c. of Stanislaus st., 6 inch R., 19 e. and 1 n. of n. w. c.

Krettner street, between William and Peckham streets, 4 inch R., 611/2 s. of hyd. (for Public School No. 31).

Lord street, n. w. c. of Seymour st., 6 inch R., 10 e. and 15 n. of hyd. on n. w. c.

Lovejoy street, center of Bailey avenue, 6 inch R., 13 w. and 19 n. of hyd. on s. e. c.

Lovejoy street, s. e. c. of Sherman st., 6 inch R., 19 n. of s. e. c. Lovejoy street, s. e. c. of Shumway st., 6 inch R., 18 n. and 5 e. of s. e. c.

Lovejoy street, s. w. c. of Coit st., 6 inch R., 20 n. of s. w. c.

Lovejoy street, s. e. c. of Detroit st., 6 inch R., 16 n. and 3 e. of
s. e. c.

Lovejoy street, s. e. c. of Townsend st., 6 inch R., 23 n. and 2½ e. of s. e. c.

Lovejoy street, s. w. c. of Fillmore avenue, 6 inch R., 24 n. and 5 e. of s. w. c.

Lyman street, s. e. c. of Metcalf st., 6 inch R., 11 n. and 3 w. of hyd.

Louisiana street, s. e. c. of Bridge, 10 inch R., 53 s. and 7 w. of flange in center of pipe.

Louisiana street, n. e. c. of Bridge, 10 inch R., 52 n. and 10 w. of flange in center of pipe. *

Laurel street, s. w. c. of Masten st., 6 inch H., 18 n. of s. w. c.

Lemon street, s. w. c. of North st., 6 inch H., 27 e. and 3 n. of s. w. c.

Masten street, s. w. c. of Dodge st., 6 inch H., 18½ e. of s. w. c.

Masten street, s. w. c. of Northampton st., 6 inch H., 23 e. of s. w. c.

Masten street, s. w. c. of Riley st., 6 inch H., 231/2 e. of s. w. c.

Masten street, s. w. c. of Puffer st., 6 inch H., 25 e. and 2 n. of s. w. c.

^{*} This is the 16 inch pipe over the Louisiana-street bridge over the Hamburgh canal.

- Military road, n. e. c. of Amherst st., 6 inch R., 52 w. and 67 n. of hyd.
- Military road, opp. Glor street, 6 inch R., 73 s. and 18 w. of hyd. opposite Glor st.
- Military road, opposite Austin street, 6 inch R., 13 w. and 13 n. of hyd.
- Military road, n. e. c. of Chandler st., 10 inch R., 25 w. of n. e. c. Military road, n. e. c. of Hertel ave., 10 inch R., not located.
- Myers street, n. w. c. of Genesee st., 6 inch H., 16 e. of n. w. c.
- Myers street, s. w. c. of Best street, 6 inch H., 16 e. and 6 s. of s. w. c.
- Maryland street, center of Niagara street, 6 inch R., 25 n. and 30½ w. of s. e. c.
- Maryland street, s. w. c. of Prospect ave., 6 inch R., 19 w. and 38 s. of hyd.
- Moore street, s. e. c. of Elk street, 2 inch R., 9½ w. of s. e. c.
- Mohr street, center of Broadway, 6 inch R., 9 e. and 52 n. of hyd. on n. e. c.
- Mackinaw street, n. e. c. of Sidway st., 6 inch R., 53 s. and 7½ e. of hyd. on n. e. c.
- Mackinaw street, n. e. c. of Katharine st., 6 inch R., 34 s. and 40 e. of hyd. on n. e. c.
- North Parade avenue, n. e. c. of Avenue A, 6 inch H., 9 s. and 26 w. of hyd.
- North street, s. w. c. of Jefferson st., 6 inch H., 28 n. of s. w. c.
- Northampton street, s. e. c. of Jefferson st., 10 inch H., 24 n. of s. e. c.
- Northampton street, s. e. c. of Timon st., 10 inch H., 23 n. and 4 e. of s. e. c.
- Northampton street, between Wohlers and West Parade avenues, 10 inch H., 23 w. and 366 e. of s. e. c. Wohlers ave.

- Northampton street, s. e. c. of Humboldt parkway, 10 inch H., 23 n. and 7 e. of s. e. c.
- Northampton street, s. w. c. of Avenue A, 10 inch H., 23 n. and 2 w. of s. w. c.
- North Division street, to hyd. between Michigan and Chestnut sts., 6 inch R., 6 n. of hyd.
- North Division street, to hyd. between Chestnut and Pine sts., 6 inch R., 7 n. of hyd.
- North Division street, s. w. c. of Pine st., 16 inch R., 23 n. of s. w. c.
- North Division street, to hyd. between Pine and Cedar sts., 6 inch R., 5 n. of hyd.
- North Division street, to hyd. between Cedar and Hickory sts., 6 inch R., 6 n. of hyd.
- North Division street, s. e. c. of Hickory st., 16 inch R., 21 n. and 3 e. of s. e. c.
- North Division street, to hyd. between Hickory and Spring sts., 6 inch R., 7 n. of hyd.
- North Division street, s. w. c. of Spring st., 16 inch R., 24 n. of s. w. c.
- North Division street, s. w. c. of Spring st., for brewery, 4 inch R., 12 n. and 4 w. of s. w. c.
- North Division street, to hyd. between Spring and Jefferson sts., 6 inch R., 6 n. of hyd.
- North Division street, s. w. c. of Jefferson st., 16 inch R., 27 n. and 53 e. of s. w. c.
- North Division street, to hyd. s. w. c. of Jefferson st., 6 inch R., 20 n. and 3 w. of s. w. c.
- North Division street, s. e. c. of Jefferson st., 6 inch R., 29 e. and 26 n. of s. w. c.

- Prenatt street, n. e. c. of Euclid place, 4 inch R., 6 w. and 8 s. of hyd.
- Prenatt street, s. e. c. of Smith st., 6 inch R., 23 n. and 3 w. of s. e. c.
- Prenatt street, n. w. c. of Smith st., 6 inch R., 8 s. of n. w. c.
- Plymouth avenue, s. e. c. of School st., 6 inch H., 3 n. and $27\frac{1}{2}$ e. of hyd. on s. w. c.
- Pine street, s. w. c. of North Division st., 6 inch R., 19 e. and 2 n. of s. w. c.
- Perry street, s. w. c. of Gorham st., 6 inch R., 6½ e. and 11 n. of hyd. on s. w. c.
- Pink street, s. w. c. of Montgomery st., 6 inch R., 10 n. of s. w. c.
- Pink street. s. e. c. of Smith st., 6 inch R., 23 s. of n. e. c.
- Riley street, n. e. c. of Masten st., 6 inch H., $17\frac{1}{2}$ s. of n. e. c.
- Riley street, n. w. c. of Masten st., 6 inch H., 18 s. of n. w. c.
- Riley street, n. e. c. of Jefferson st., 6 inch H., 53 e. and 6 s. of n. w. c.
- Rose street, n. e. c. of High st., 6 inch H., 17 w. of n. e. c.
- Rose street, s. w. c. of North st., 6 inch H., 17 e. of s. w. c.
- Red Jacket street, s. w. c. of Perry st., 4 inch R., 16 1/4 e. of s. w. c.
- Richmond avenue, s. e. c. of Ferry st., 4 inch H., 61 e. and 29 n. of hyd. on s. w. c.
- Richmond avenue, n. e. c. of Butler st., 6 inch H., 37 n. and $r_3\frac{1}{2}$ w. of hyd. on s. e. c.
- Richmond avenue, between Ferry and Butler sts., for Highland ave., 4 inch H., 69 e. and 9½ n. of hyd. between Ferry and Rhode Island sts.
- Richmond avenue, s. e. c. of Butler st., 6 inch H., 13½ w. and 3 s. of hyd. on. s. e. c.
- Richmond avenue, n. e. c. of Anderson place, 6 inch H., 59 e. and 19 n. of hyd. opposite Anderson place.

- Raze street, n. w. c. of Bristol st., 6 inch R., 17 e. of n. w. c.
- Raze street, s. w. c. of Oneida st., 6 inch R., 19 e. of s. w. c.
- Raze street, n. w. c. of Oneida st., 6 inch R., 17 e. of n. w. c.
- Roehrer avenue, n. w. c. of Best st., 6 inch H., 35 w. and 16 s. of n. e. c.
- Roehrer avenue, s. e. c. of Dodge st., 6 inch H., 39½ e. and 11 s. of hyd. on s. w. c.
- Reed street, n. w. c. of Broadway, 6 inch R., 7 e. and 3½ n. of hyd. on n. w. c.
- Reed street, s. w. c. of Sycamore st., 6 inch R., 9 e. and 52 s. of hyd. on n. w. c.
- Spring street, s. w. c. of North Division st., 6 inch R., 22 n. and 24 e. of s. w. c.
- Smith street, n. w. c. of Lovejoy st., 6 inch R., 16 e. and 2 s. of n. w. c.
- School street, center of Fargo ave., 6 inch H., 32½ w. and 34 n. of s. e, c.
- Sherwood street, n. w. c. of Hampshire st., 6 inch H., 30 e. and 3 s. of n. w. c.
- Sherwood street, s. w. c. of Arkansas st., 6 inch H., 14 s. and 39 w. of hvd.
- Sweeney street, n. w. c. of Genesee st., 6 inch H., 19 e. of n. w. c.
- Sweeney street, s. w. c. of Best st., 6 inch H., 19 e. and 8 s. of
- Sweet street, center of Broadway, 6 inch R., 5 e. and 16 s. of hyd. on n. w. c.
- Seneca street, s. e. c. of Michigan st., 12 inch R., 27 n. and 23 w. of s. e. c.
- Seneca street, s. w. c. of Chicago st., 12 inch R., 28 n. and 3 e. of s. w. c.

- Seneca street, s. w. c. of Louisiana st., 12 inch R., 27 n. and 10 e. of s. w. c.
- West Seneca street, n. w. c. of Pearl st., for hyd., 6 inch R., 6 s. of hyd.
- Summer street, s. e. c. of Seneca st., 2 inch R., 16 w. and 1 s. of s. e. c.
- Terrace, Lower, center of Erie st., 4 inch H., 44 s. and 65 e. of n. w. c., for planing mill.
- Terrace, Lower, opposite planing mill, 6 inch R., 127 n., and 58 e. of n. w. c., for planing mill.
- Townsend street, n. w. c. of Lovejoy st., 6 inch R., 171/2 e. and 5 n. of n. w. c.
- Townsend street, s. w. c. of Broadway, 6 inch R., 9 n. and 16 e. of s. w. c.
- Tonawanda street, n. e. c. of Niagara st., 10 inch R., $4\frac{1}{2}$ w. and 45 s. of hyd. on n. e. c.
- Tonawanda street, center of block between Niagara and Tonawanda sts., 10 inch R., 5½ e. and 14½ s. of hyd. between the R. R. and Watts st.
- Tonawanda street, s. e. c. of Amherst st., 10 inch R., 23½ w. and 3 s. of s. e. c.
- Vary street, s. w. c. of Jefferson st., 4 inch R., 13 n. of s. w. c.
- Vary street, s. e. c. of Spring st., 4 inch R., 11 n. of s. e. c.
- Vandalia street, n. w. c. of South st., 4 inch R., 65 w. and 15 n. of hyd.
- West Parade avenue, s. w. c. of Northampton st., 6 inch H., 11 e. and 4 s. of hyd. on s. w. c.
- Walden avenue, between Hoffman and Rhein st., 10 inch H., 151 e. and 1 n. of hyd. opposite Hoffman st.
- Walden avenue, east of R. R., 10 inch H., 77 e. and 2 n. of hyd. east of R. R.

- Walden avenue, west of City line, 6 inch H., 3½ n. and 9½ e. of 2d, w. of City line.
- Wilson street, n. w. c. of Broadway, 6 inch R., 11½ e. and 1½ s. of n. w. c.
- Wilson street, s. w. c. of Sycamore st., 6 inch R., 161/2 e. of s. w. c.
- Wilson street, n. w. c. of Sycamore st., 6 inch H., 16 e. of n. w. c.
- Wilson street, s. w. c. of Genesee st., 6 inch H., 16 e. and 23 n. of hyd. on s. w. c.
- Webster street, n. w. c. of Ferry st., 6 inch H., 16 e. and 4 n. of n. w. c.
- West avenue, n. w. c. of Porter ave., for Holy Angels Church, 4 inch H., 25 e. and 2 s. of n. w. c.
- Four-inch valve for the brewery on West Bennett st., not located and no record.
- Six-inch valve at the lower engine-house, not located and no record. Six-inch valve for the Insane Asylum, in the yard, not located and no record.

PUMPING DEPARTMENT, 1887.

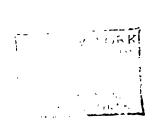
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PUMPING DEPARTMENT.

PUMPING ENGINES, AND THEIR CAPACITY PER 24 HOURS.

I. Lower House.

Engir	ne No.	Ι,	Worthi	ngton								10,000,000	gallons.
44	"	2,	44									15,000,000	"
• •		3,	"			•						15,000,000	46
• •	• •	4,	Gaskill.									15,000,000	"
Engir	ne No.	5,	Gaskill	COUR	•		•		•	•		20,000,000	gallons.
Engir	ne No.	2,	Holly.					•				6,000,000	gallons.
"	"	ı,	" I	Reserv	/e							3,000,000	. "
Wate	r pum	oed,	1887.								14,	033,297.522	. "
"	"		ı 886 .								I 2,	169,882,676	; "
	Incre	ase,	1887.						•	•	Ι,	863,414,846	gallons.

DAILY SUPPLY.

The average daily supply for the year 1887 was thirty-eight million four hundred and eighty-four thousand nine hundred and thirty-six gallons, an increase of five million four hundred and sixteen thousand seven hundred and sixty-four gallons over the previous year. On the following days, the greatest and least amounts were pumped:

GREATEST AMOUNTS PUMPED.

Monday, January 10th Tuesday, January 11th Tuesday, January 18th			53,153,520 "
LEAST	CUOMA 1	NTS PUMPED.	
Sunday, April 24th			29,907,600 gall om
Sunday, May 1st			29,123,520 "
Sunday, May 8th			28,351,060 "

	COAL, SI	NDRY	PURPO	SES.		
No. 1.	Starting Fires. Tons of Coal.	Electric Light.	Hoisting Coal.	Blasting.	Store-House.	
403,2Q 287,28 289,2Q 129,4C 466,44 447,6i 163,6i 255,0i 203,2i 133,4i 435,8i 212,4i	6.400 6.1600 7.1600 8. 5.1200 5. 7.400 7.400 6.1600 5. 8. 9.1600	15 15 15 15 15 15 15 15 15 15	15 30 16 	IO 12	3.1620	TOTAL CONSUMPTION OF COAL. Pumping . 12404.1600 Other purposes 1,969.420 Tons . 14,374.20
3,686,4	83 Soo	180	100	34	6.1620	
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THE NEW YORK
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ASTOR, 156 - 100
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vir, L. ation. Size of Pipe, and on what System. EAST SIDE. Schedule of Water Pipe laid in the

Street.	From	:	Size of Pipe, Inches.	Location of Pipe.
	Fillmore avenue	Will	9	33 ft. s. of n.
Abbott road.	Smith.	1,350 feet easterly.	9	R 26 ft. n. of s. line.
Adams.	Eagle.	Clinton	9	19 ft. e. of w.
Adams.	Clinton	William.	9	22 ft. e. of ₩.
Adams .	William.	Brown	20	19 ft. e. of w.
Adams.	Brown	Genesee	 9	14 ft. w. of e.]
Alabama	Seneca	Carroll	4	16 ft. e. of w.
Alabama	Mackinaw.	South.	9	18 ft. w. of e.
Alabama .	- Репу.	Mackinaw	9	44 ft. e. of w.
Alabama .	Perry	Scott	9	23 ft. w. of e.
Alwin alley.	Urban alley	300 feet easterly		I 32 ft. s. of n. line.
Ash	Genesee.	Broadway	4	33 ft. w. of e.
Avenue A	Genesee.	Northampton.	_	18 ft. e. of w.
Babcock .	William.	Clinton	_ •	45 ft. w. of e.
Babcock	Elk.	Wescott		ft. w. of e.
leckwith.	Adams	Sycamore	9	20 ft. n. of s.
Beech	Vinginia.	Carlton	9	36 ft. w. of e.
Bennett.	William.	Broadway .	4	35 ft. e. of w.
Benzinger	Ludington	Lovejoy	_ 	24 ft. w. of e.
Berlin	High	Best	_ _ _ _	26 ft. e. of w.
Best	Main	Masten	9	ft. s. of n.
Best	Jefferson	Grape	4	1 17 ft. n. of s. line
Best	Jefferson	Fox.	01	ft. n. of s.
Best	Fox	Genesee .	— ∞ -	1 23 ft. n. of s. line
Blossom alley	Huron	Broadway	4	ft. e. of w.
Bond	(Tinton	Howard	_	الكارد معن موله إناه

on what System. Size of Pibe. Schedule of Water Pipe laid in the City.

Street.	From	T.	Size of Pipe, Inches.	Location of Pipe
Boston alley	Tupper	Virginia	4	7 ft. e. of w.
Bristol	Spring	Jefferson		37 ft. s. of n.
Bristol	Emslie	Bond	4	44 ft. s. of n.
Broadener	Smith.	Raze	9 4	ft. s. of n.
Broadway	Ellicott	Pratt	9	50 ft. s. of n.
Broadway	Pratt	Fillmore avenue		8 35 ft. s. of n. line.
Broadway	Sherman.	Smith.	4	5 ft. n. of s.
Broadway	Fillmore avenue	Bailey avenue		50 ft. n. of s.
Broadway	Bailey avenue	N. Y. C. R. R.	12	57 ft. n. of s.
Brown	Adams	Jefferson	20	20 ft. n. of s.
Bundy alley	Sycamore	350 feet northerly.	4	12 ft. w. of e.
Burton alley	Ellicott	Boston alley	4	11 ft. s. of
Burton alley	Kalph alley	Michigan	4	16 ft. n. of s.
Burwell place	Eillmore enemy	rerry	4,	23 it. e. of w.
Camp	Ciencie avenue	Sycamore	o ve	3 5
Carlton.	Main	Mulberry	9	23 ft. s. of n.
Carlton	Mulberry	I.emon	9	24 ft. s. of n.
Carlton.	I.emon	Genesee.	9	23 ft. s. of n.
Carroll	Washington	Michigan	9	33 ft. n. of s.
Carroll	Michigan	Š	4	33 ft. n. of s.
Carroll	200 feet west of Chicago	160 feet west of Chicago.	- X	33 ft. n. of s.
Carroll	Chicago .	Louisiana	۰ م	20
	Headol	Anguality	4 •	10 II. S. Of II.
Cerroll	Hydraulic	Reservation line	• •	
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H 32 ft. n. of s. line. R 30 ft. w. of e. line. R 20 ft. w. of e. line.	17 ft. w. of e.	30 ft. w. of e.	30 ft. w. of e.	14 ft. e. of w.	28 ft. e. of w.	41 ft. e. of w.	26 ft. n. of s.	15 ft. e. of w.	25 ft. n. of s.	25 ft. s. of n.	43 ft. s. of n.	42 ft. s. of n.	24 ft. s. of n.	24 ft. n. of s.	22 ft. e. of w.	14 ft. w. of e.	14 ft. w. of e.	26 ft. s. of n.	{ 26 ft. w. of e.	28 ft. w. of e.	37 ft. w. of e.	18 ft. e. of ₩.	21 ft. n. of s.	37 ft. s. of n.	32 ft. ₩. of e.	40 ft. n. of s.	24 ft. s. of n.	56	24 ft. s. of n.
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Grey Broadway	Swan	Ferry	900 feet norther	100 feet norther	Carroll	Ohio oidO	Ellicott	Curtiss	Selkirk	Madison	Oak	Union	Emslie	Babcock	Broadway	Elk	Buffalo river	Pine	Jefferson	North line of lot	1,100 feet southerly	Broadway	Jefferson	1,875 feet easterly	Glenwood avenu	Emslie	Smith	Union	Fillmore avenue.
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erion . an .	Jeca	nwood avenue.		теся		change		vejoy	ith	ui	shington			islie	ward			chigan	nesee	lliam	adway	Iliam	un	ferson	са	shington	pu		ith
Jefferson . Swan .	Seneca	Glenwood avenue	Ferry	Seneca	Seneca	Exchange	Main	Lovejoy	Smith	Main	Washington	Oak	Union	Emslie	Howard		Ohio	Michigan	Genesee	William	Broadway	William	Main	Jefferson	Utica	Washington	Bond	Main	Smith
Jayuga Jefferson Swan			r Ferry	o Seneca		Thicago Exchange	78	Lovejoy	Smith		Clinton	Oak			Coit	Columbia Perry) · · · · · · · · · · · · · · · · · · ·	ypress Michigan	Davis Genesee		Deshler			<u> </u>			• • • • • • •		Eagle Smith

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
East Bennett	William	Clinton	4	~	24 ft. w. of e. line.
East Market	Scott	Perry	4	-	23 ft. w. of e. line.
East Market	Perry	Fulton	. 9	~	19 ft. w. of e. line.
Eaton	Michigan	532 feet easterly	9	Ξ	38 ft. n. of s. line.
Eaton	Masten	Jefferson	9	Η	21 ft. n. of s. line.
Elk	Ohio	Mississippi	4	٠ ۲	ft. s. of
Elk	Columbia	Michigan	. 9	~	38 ft. s. of n. line.
Elk.	Michigan	Babcock	2	~	ft. s. of
Elk	Babcock	500 feet easterly	9.	بد	ft. s. of
Ellicott	Exchange	Seneca	01	~	ft. e. of w.
Ellicott	Chippewa	550 feet northerly	4	H	15 ft. w. of e. line.
Ellicott	550 feet north of Chippewa.	Tupper	01	Ξ	نه
Ellicott	Tupper	600 feet southerly.	4	~	of e.
Ellicott	Tupper	Goodell	01	H	of e.
Ellicott	Goodell	Goodrich	9	Ή	
Ellicott	Goodrich.	Best	9	Η	ن
Ellicott	Best	Dodge	9	Ξ	ft. e. of w.
Ellicott	Dodge	Northampton	9	H	ft. e. of w.
Ellicott	Clinton	Broadway	91	2	of w.
Ellicott	Seneca	Clinton	0	2	ft. w. of e.
Ellicott	Broadway	Genesee	01	2	ft. e. of w.
Elm	Genesee	Tupper	9	~	ft. e. of w.
Elm	Tupper	High	9	Ξ	ft. w. of e.
Elm	North	Best.	9	H	30 ft. e. of w. line.
Elm	Swan	Genesee.	01	2	ft. e. of w.
Elmslie	Seneca	Broadway	9	2	ft e. of w.
Euclid place	Elk	Prenatt.	4	곲	35 ft. e. of w. line.
Euclid place	Prenatt	Abbott road	_ •	<u>س</u>	8 ft. e. of w. line.

R 23 ft. n. of s. line. R 32 ft. n. of s. line. R 32 ft. n. of s. line.	22 ft. s. of n.	24 ft. s. of n.	24 ft. n. of s.	40 ft. s. of n.	39 ft. s. of n.	18 ft. e. of w.	20 ft. e. of w.	84 ft. w. of e.	16 ft. w. of e.	19 ft. w. of e.	22 ft. w. of e.	25 ft. s. of n.	14 ft. n. of s.	- 14 ft.	40 ft. e. of w.	28 ft. w. of e.	39 ft. e. of w.	36 ft. s. of n.	24 ft. n. of s.	27 ft. n. of s.	24 ft. n. of s.	20 ft. n. of s.	7 ft. w. of e.	IO ft. w. of e.	7 ft. w. of e.	26 ft. s. of n.	61 ft. s. of n.	39 ft. s. of n.	26 ft. n.	40 ft. s. of n.	39 ft. s. of n.	12
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Jefferson . Michigan Heacock .	Heacock	Smith.	kirk	Soo feet eas	efferson	eckham	Broadway	Sycamore.	Broad way	200 feet sou	Sandusky	Chicago.	South Cedan	efferson	Sycamore	North :	Sycamore	ouisiana	. S. & M. S	Eric Railwa	Hamburgh	Railroad.	20 feet northerly	,760 feet souther	540 feet norther	otter .	צג	efferson		Bailey ave		efferson
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Main . Washington Jefferson	Jefferson	Leacoc	mith.	Main .	Main.	eneca	eckham	enesee	ycamore	.:	: ::	Michigan	Chicago.	South Cedar	renesee	renesee	Broadway	Michigan	lamburgh	an Rensselae	ouisiana	smith.	south Michigan	outh Michigan	20 north of S	Michigan	Main .	Michigan	efferson	est .	Michigan	Mortime
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Schedule of Water Pipe laid in the City, giving Location, Size of Pipe and on what System.

Street.	From	To	Size of Pipe, Inches.	المراجعة ال
German alley	Sycamore.	Genesee	4	IS ft. e. of w. line.
Glenwood avenue.	Main	Purdy	9	I 37 ft. n. of s. line.
Glenwood avenue	Purdy	Walker	9	I 27 ft. n. of s. line.
Goodell	Main	Michigan.	12 I	II 40 ft. s. of n. line.
Goodell	Michigan.	Cherry	01	
Goodell alley	Tupper	Goodell .	4	H 7 ft. e. of w. line.
Goodrich	Main	Michigan.	9	I 40 ft. n. of s. line.
Gorham	Elk.	Perry	9 -	33 ft. w. of e. line.
Granger	Chicago	Ohio Basin Slip	4	24 ft. s. of n. line.
Grape.	Cherry.	Virginia	- 8	38 ft. w. of e. line.
Grape.	High.	Best	9	I 39 ft. w. of e. line.
Grape.	Virginia .	Carlton	9	25 ft. w. of e. line.
Grape.	Carlton	High	9	I 44 ft. e. of w. line.
Green.	Michigan.	Beak	4	
Grey	Broadway.	Genesee	9	28 ft. w. of e. line.
Grey	Carlton	High	9	I 18 ft. e. of w. line.
Guilford	Broadway.	Sycamore.	9	34 ft. w. of e. line.
Guilford	Best	Genesee	9	I is ft. e. of w. line.
Hamburgh	Elk	Fulton.	9	. 23 ft. w. of e. line.
Hamburgh	Exchange .	Elk.	91	. 25 ft. w. of e. line.
Hamburgh	Elk.	South	01	. 23 ft. w. of e. line.
Harlow place	Purdy	Alexander place	_ 4 	[22 ft. n. of s. line,
Hayward	Elk.	Fulton	9	23 ft, e. of w. line.
Hayward	Perry	250 feet northerly	9	18 ft. w. of e. line.
Hayward.	Fulton.	150 feet northerly.	9	48 ft. w. of e. line.
Heacock	Seneca	Scott	4	
Heacock	Exchange	Perry	12 K	18 ft. w. of e. line.
Herman	Broadway	North	- B	30 ft. w. of e. line.

Best 6 II Genesee	Best 6 II Genesee	Best	ft. e. of w. ft. e. of w. ft. w. of e.	ب ب ن د	ft. s. of n.		ft. n. of s.	ft. n. of s.		ft. s. of n.	ft. n. of s.		ft. s. of n.	ft. n. of s.	ft. w. of e.		ft. w. of e.	ft. s. of n.	ft. e. of w.	ft. w. of e.	ft. e. of w.	ft. w. of e.	r. e. of ₩.	ft. w. of e.	ft. w. of e.	i.e. 0. ₩.	ft. w. of e.	
Best Genesee Eagle Son Grey Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Madison. Madison. Metcall Shumway Raze Shumway Naze Shumway Raze Shumway Raze Shumway Perry Mary Oak Carroll Perry Perry Mary Ohio Montgomery William I co feet north of George Sycamore. Davis Davis Brown Virginia High Feet	Best Genesee Bagle Son Grey Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Madison. Madison. Metcall Shumway Baboock Shumway Naze Smith Baboock Shumway Raze Smith Baboock Amary Oak Carroll Perry Perry Mary Ohio Montgomery William Too feet north of George Sycamore. Davis Brown Virginia High High Baboock Mortgomery Walliam Too feet north of George Brown Virginia High High	Best Genesee Bagle Son Grey Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Mortimer Madison. Madison. Metcall Shumway Baboock Shumway Naze Smith Baboock Shumway Raze Smith Baboock Amary Oak Carroll Perry Perry Mary Ohio Montgomery William Too feet north of George Sycamore. Davis Brown Virginia High High Baboock Mortgomery Walliam Too feet north of George Brown Virginia High High						_		_														_		_		
Son. Son. Son. Son. Son. Son. Son. Son.	son.	son.	9 <u>9 9</u>	10	• •	• • • • • •		•	• ·	3,9	•	4 51				• •	• • • • • • • • • • • • • • • • • • •	•	4 02	•		ge 2	*	· · ·	• ;	9	2	· ·
Son. Son. Son. Son. Son. Son. Son. Son.	Son. Son. Son. Son. Son. Son. Son. Son.	Son. Son. Son. Son. Son. Son. Son. Son.			· · · · · · · · · · · · · · · · · · ·		 		street					:	 		· ·	ery	avenue	orth of Geor		Jo 1		•			 	
rth. in i	North Cherry Genesee Main Jefferson Spring Madison Adams Madison Sherman Sherry Matcalf Washington Seveca Elk Scott Perry Mary Lord Montgomery Exchange William Too feet north of George Sycamore Davis Brown Virginia High	Cherry Cherry Cherry Genesee Genesee Main Jefferson Jefferson Jefferson Madison Adams Madison Shurman Charl Wetcalf Westalf Westalf Westalf Westalf Wonstynner Extange William William Ioo feet north of George Ioo feet north of George Sycamore Davis Brown Wirginia Wirginia Wirginia	Best Genesee Eagle	Jefferson	Mortimer	Modison	Adams.	Monroe	Sherman	Shumway	Raze	Smith Babcock .	Stetson.	Oak	Perry .	Perry .	Ohio	Montgom	William	100 feet n	Sycamore	400 feet n	Davis.	Davis	Brown.	Virginia High	Best	į
rth rtry nesce in ing	North. Cherry Genesee Main Jefferson Spring Spring Spring Spring Jefferson Monroe Madison Adams Madison Adams Madison Sherman Shurway Metcalf Weshington Seneca Elk Scott Perry Mary Lord Lord Montgoniery Exchange William Too feet north o Sycamore Sycamore Sycamore Sycamore Davis Brown	North. Cherry Genesee Genesee Jefferson Main Jefferson Jefferson Monroe Madison Adams Madison Sherman Sherman Sherman Sherman Sherman Sherry Metcalf Washington Seneca Elk Scott Perry Mary Lord Montgomery Exchange William 100 feet north o 100 feet north o 5ycamore Sycamore		•	• •	•		:	:		·			·		·				·		:					 	•
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Street.	From	ų	Size of Pipe, Inches.	System.
Jefferson	Ferry	Puffer	91	. 37 ft. w. of e.
Jefferson	Puffer	Main	91	40 ft. w. of e.
Jerry	Raze	Fillmore avenue	4	21 ft. n. of s.
Johnson	North	Best	9	of e.
Johnson	Broadway	North	9	45 ft. w. of e.
Jones	Lyman	250 feet southerly	9	39 ft. w. of e.
Kane	Sycamore	425 feet northerly	4	R { 8 ft. e. of w. line.
Kana	(jenesee	428 feet southerly		10 ft a 0f c
Katherine	FILE	Frie Railway	•	14 ft to of w
Kentucky	St. Clair	Ottawa.	9 9	
Ketchum alley	Carlton	High	4	11 ft. w. of e.
Kingsley	Jefferson	Rohrer	. 9	18 ft. n. of s.
Kosciuszko	Broadway	Stanislaus	9	18 ft. e. of w.
Krettner	Howard	150 feet north of Lovejoy	9	33 ft. w. of e.
Krettner	Broadway	Lovejoy	•	15
Lafayette.	Washington	Broadway	•	30 ft. s. of n.
I.emon	Cherry	North	9	23 ft. e. of w:
Lester	Seneca	Soo feet northerly	9	30 ft. w. of e.
Lewis.	William	Howard	9	21 ft. e. of w.
Lewis	Clinton	Norton	9	32 ft. w. of e.
Laurel	Michigan	Masten	9	27 ft. s. of n.
Locust	Cherry	North	9	78
Lord	Clinton	Eagle	9	27 ft. w. of e.
Lord	South Division	270 feet southerly	9	32 ft. w. of e.
Louisiana	Seneca	Hamburgh canal	9	28 ft. w. of e.
Louisiana	Across Hamburgh canal	· · · · · · · · · · · · ·	91	4
Lovejoy	Emslie	Fillmore avenue.	•	R 25 ft. s. of n. line.

ft. s. of n. ft. s	ft. s. of n. ft. s. of n. ft. s. of n. ft. w. of e.	ft. e. of e. e.	ن ≩ ن ن ≩ ن	संसंसंसंसंसंसंस्ट्रेस्ट ः
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	 		oorhouse lot	
Bailey avenue	Railroad Hamburgh Fitgerald Brown	Howard. Prime Exchange North Division . Goodell	ine of P	Perry Dodge Dodge Dodge Mortimer Elk Prenatt Prenatt William Lyman Lyman Best Hamburgh Genesse Goodell
Central avenue Fillmore avenue Williamsville road.igarfield	Fitzgerald	Clinton Ohio Prime Exchange North Division	llen orth	Elk. Best. Dodge. Selectson Seneca Elk. Howard Howard Cenesee Cousiana Ohio Genesee Genesee
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Lovejoy Lovejoy Lovejoy Ludington Lutheran alley	Mackinaw Mackinaw Mackinaw	Madison	Main	Marvin

Street.	From	To	Size of Pipe, Inches,	System.
Michigan	120 feet north of Goodell	High	9	e. of w.
Michigan	High	Best	01	32 ft. e. of w.
Michigan	Best	Ferry	9	42
Milnor	Broadway	William	9	2
Minton	Smith.	Selkirk	9	32 ft. n. of s.
Mississippi	Ohio	Elk	4	19 ft. w. of e.
Mississippi	Elk	Mary	- 8	19
Mississippi	Mary	Perry	4	19
Mississippi	Perry	Scott	.0	19
Mohawk	Washington	Ellicott	9	31
Mohr	Broadway	Grimes	9	21
Monroe	Clinton	Brown	9	*
Monroe	Clinton	Eagle	9	R 32 ft. w. of e. line.
Montgomery	Howard	Pink	9	19
Moore	Elk	Delaware & Lack. R. R	8	R 7 ft. w. of e. line.
Mortimer	Cherry	Broadway	•	R 32 ft. w. of e. line.
Mortimer	William	495 feet north of Peckham.	9	R 32 ft. w. of e. line.
Mulberry	Goodell	Carlton	•	39 ft. w.
Mulberry	High	North	•	27
Mulberry	Carlton	High	9	43
Nichols alley	Seneca	200 feet northerly	4	_
North	Main	Michigan	. •	35
North	Michigan	Locust	9	35 ft. s. of n.
North	Rose	Grape	•	25 ft. s. of n.
North	Grape	Orange	9	39 ft. s. of n.
North	Locust	Orange	9	8
North	Rose	Jefferson	9	s. of n.
Northampton	Jefferson	Masten	9	H 43 ft. s. of n. line.

20 ft. n. of s. line. 34 ft. s. of n. line. 24 ft. n. of s. line. 35 ft. s. of n. line.	. ⊏ ≱	di≱	16 ft. e. of w. line.	ن	ĕ ĕ	15 ft. w. of e. line.		40 ft. n. of s. line.	*	24 ft. n. of s. line.	of ₩.	22 II. e. of w. line.	*	20 ft. w. of e. line.	ft. e. of w.	ft. w. of e.	ft. e. of w.		ft. s. of n. c	si.	23 it. s of n. line.
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Masten Avenue A N. Y. C. & H. R. R. R. Main	Jefferson.	500 feet casterly	Tupper Tupper	Goodell	Virginia High	Best	Elk	800 feet south of Chicago	125 feet northerly	Smith	High	Ichigh Val. R. R.	350 feet southerly	Carlton	High	Best	North	Mississippi	Michigan	Heacock	Ene Kallway
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Michigan Jefferson Jefferson Michigan	Michigan Lovejoy	Lewis	Sycamore Genesee	Tupper .	Virginia	North	Main	Mississippi	Louisiana	Emslie.	Cherry	Seneca	Elk.	Cherry	Carlton	North	High	Main	Columbia	Marvin	Heacock
Michigan Jefferson Jefferson Michigan	Michigan I. Lovejoy	Broadway	Sycamore	Tupper	Virginia	North	Main	Mississippi	Louisiana	Central railroad	Cherry	Seneca	Elk	Cherry	Carlton	North	High	Main	Columbia	Marvin	Heacock
Michigan Jefferson Jefferson Michigan	Michigan I. Ovejoy	Broadway	Sycamore	Tupper	Virginia	North	Main	Mississippi	Louisiana	Emslie.	Cherry	Seneca	Elk	Cherry	Carlton	North	High	Main	Columbia	Marvin	Heacock
Michigan Jefferson Jefferson Michigan	Michigan I.ovejoy	Broadway	Sycamore	Tupper	Virginia	Seems	Main	Mississippi	Louisiana	Emslie	Cherry	Seneca	Elk	Chemy	Carlton	North	High	Main	Columbia	Marvin	I Heacock

Schedule of Water Pipe laid in the	Pipe laid in the City, gri	City, graing Location, Size of Pipe and on what System.	be and on	what System.
Street	From	Тo	Size of Pipe, Pipe, System	Location of Pipe,
Ретту	Gorham	Winona	6 R	21 ft. n. of s.
Pine	Eagle	William	6 R	20 ft. w. of e.
Pine	William	Sycamore	4 R	26 ft. w. of e.
Pink	Smith	Montgomery	6 R	To ft. n. of s.
Porter	Van Rensselaer	Hydraulic	9	32 ft. s. of n.
Porter	Van Rensselaer	Heacock	9	33 ft. n. of s.
Polter	William	Isroadway	0 . X	18 ft. e. of w.
ratt	Clinton	William	4 4 K 5	37 II. W. OI C.
Pratt	ragie William	Geneset	9	25 II. c. of
Prenatt	Euclid place	Smith	6 R	24 ft. n. of s.
Puffer	Main	Jefferson	Н 9	38 ft. s. of n.
Purdy	Ferry	Harlow place	H 9	18 ft. e. of w.
Kalph alley	Burton alley	Virginia		16 ft. e. of w.
Randall	William	200 feet southerly	1X R	15 ft. w. of e.
Raze	(Tinton	James	9	36 ft. w. of e.
Kaze	Clinton	Bristol	0 A	33 ft. w. of e.
Kaze	Bristol	Jerry Fulton	0 9	33
Red Jacket	Perry	Scott	4 R	16 ft. e. of w.
Reed	Sycamore	Genesee	6 R	21 ft. e. of w.
Reed	Broadway	Sycamore	6 R	21 ft. e. of w.
Rey	Mortimer	375 feet easterly	4 R	20 ft. s. of n.
Rich	Genesee	Best	Н 9	32 ft. w. of e.
Riley	Masten	450 feet west of Michigan.	H 9	17 ft. s. of n.
Riley	Masten	Jefferson	9 9	32 ft. n. of s.
Riley	Jefferson	500 feet easterly	# F	17 ft. s. of n.
Koehrer ave	Best	Dodge	- 0	75

555.		ft. p. of s.	ft. e. of ₩.	#. e. of ₩.	ft. n. of s.	ft. s. of n.	ft. s. of n.	ft. n. of s.	ft. n. of s.	ft. p. of p.	ft. s. of n.	ft. e. of w.	ft. w. of e.	ft. e. of w.	، نے	tt. e. of w.	w. of e.	r. w. or e.	it. c. or w.	ft. e. of w.	ft. s. of n.	s. of n.	ft. s. of n.	ft. s. of m.]			
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0 0 4 0	*	2 2	44	9	9	9	12	12	<u>و</u> د	o 4	4	၁ ၁	9	9 4	9	01	91	•	۰	٥ ٧	5 4	0	~	٥	۰ و	۰ م	۰
Carlton High North	Illinois.	Chicago	450 feet south of Exchange.	Aco feet northerly	Washington.	Fillmore avenue.	Louisiana	Main	Dole	Hagerman	320 feet westerly	North	Peckham	Peckham	Mackinaw	Elk	Seneca	Oneida.	reckham	Peckham.	Diotal Way	Dristol	125 feet southerly	Opio	Hamburgh	Masten.	Masten
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									avenue							- · · · · · · · · · · · · · · · · · · ·		•			•	• • • • • • • •					• • • • • •
Virginia	Main .	Michigan.	Seneca.	Clifford	Main	Louisiana.	Michigan.	Michigan	Fillmore avenue.	Emslie	Hagerman	North	William	Broadway	Elk	Abbott road	Elk.	Howard	Howard	Lovejoy	Clinton		Seneca.	Louisiana	Louisiana	Michigan.	Jefferson
Virginia Carlton High	Main	Michigan.	Seneca.	Clifford	Main	Louisiana.	Michigan	Michigan	Fillmore avenue.	Emslie	Hagerman	Howard	William	Broadway	Elk	Abbott road	Elk	Howard	Howard	Lovejoy	Climbon	· · · · · · · · · · · · · · · · · · ·	Seneca	Louisiana	I Louisiana	Michigan.	Jenerson
Virginia Carlton High	Main	Michigan.	Seneca.	Clifford	Main	Louisiana	Michigan.	Michigan	Fillmore avenue.	Emslie	Hagerman	North	William	Broadway	Elk	Abbott road		Howard		Lovejoy	Climbon		Seneca	Louisiana	I Coulsiana	Michigan.	Jefferson
Virginia Carlton High	Main	Michigan.	Senect.	Clifford	Main	Louisiana	Michigan.	Michigan	Fillmore avenue.	Emslie	Hagerman .	North .	William	Broadway	Elk.	Abbott road	- · · · · · · · · · · · · · · · · · · ·	Howard		Lovejoy	Climbon	· · · · · · · · · · · · · · · · · · ·	Seneca	Louisiana	Louisiana	Michigan.	Jetterson
Virginia Carlton High	Main	Michigan.	Seneca.	Clifford	Main	Louisiana.	Michigan.		Fillmore avenue.	Emslie	Hagerman .	Howard	William	Broadway	Elk.	Abbott road				Towelow		· · · · · · · · · · · · · · · · · · ·	Seneca	Louisiana	Louisiana	Michigan.	Jefferson
Virginia Carlton High Fiteranal	Main	Michigan	Seneca.	Clifford	Main	Louisiana.	Michigan.		Fillmore avenue.	Emslie		Sherman		Shumway		Abbott road			Daward	Lovejoy		· · · · · · · · · · · · · · · · · · ·	Seneca.	Louisiana	•	•	Southampton Jefferson

Schedule of Water Pipe laid in the City, evining Location. Size of Pipe, and on what System.

Street, ·	From	To	Size of Pipe, System.	Location,
South Cedar	Seneca	Swan	4 ¤	ft. e. of w.
outh Division	Michigan.	•	. 4	ft. s. of n.
South Division	Cedar	N. Y. C. R. R.	6 R	24 ft. n. of s. line.
South Division	Emslie	ž	6 R	ft. n. of s.
South Division	Michigan	Main	_	ft. n. of s.
South Division.	Chestnut	Pine	6 R	ft. n. of s.
South Division	Pine	Cedar	4 %	ft. s. of n.
South Division	Emslie	Lord	6 R	ft. s. of n.
South Ogden	William	L. V. R. R	6 R	ft. e. of w.
Spring	Genesee	Broadway	4	ft. e. of w.
Spring	Broadway	William	·8	ft. w. of e.
Spring	William	Clinton	9	ft. e. of w.
Spring	Clinton	Eagle	4	ft. w. of e.
Spruce	Cherry	Broadway	6 R	ft. w. of e.
Stanton	Howard	Peckham	6 R	ft. w. of e.
Stanton	Lovejoy	Broadway	6 R	ft. w. of e.
Stanton	Peckham	Lovejoy	9	ft. e. of w.
St. Paul.	Main	300 feet easterly.	4 H	ft. s. of n.
St. Paul	Oak	624 feet westerly	H 9	ft. s. of n.
Strauss.	Genesee	Sycamore	-	ft. w. of e.
Strauss	Sycamore	Broadway	6 R	ft. e. of w.
Superior	Spring	Jefferson		ft. n. of s.
Swan	Main	Ellicott		ft. s. of n.
Swan	Ellicott	Cedar		ft. n. of s.
Swan	Cedar	Seneca	6 R	یے
Sweeney	Best	Genesee		ft. w. of e.
	Dansalana	And fact acceptant	,	

Sycamore	Oak	Spring	Io R	42 ft. n. of s. line.
Sycamore	Spring	Jefferson	4 ⊼	4 ft. s. of n. line.
Sycamore	Jefferson	Beckwith	*	
Sycamore	Adams	Johnson	9	41 ft. n. of s. line.
Sycamore	Johnson	Sherman		42 ft. n. of s. line.
Sycamore	Sherman	Fillmore avenue		26 ft. s of n. line.
Tennessee.	South	Erie Railroad	_	20 ft. e. of w. line.
Thomas	Howard	William		18 ft. w. of e. line.
Townsend	Lovejoy	William	6 R	ij
Troupe.	Seneca	Railroad		₩.
Thomas	Howard	Metcalf.		32 ft. e. of w. line.
Townsend.	Lovejoy	Broadway		ن
Tupper	Main	Washington	_	24 ft. s. of n. line.
Lupper	Main	Michigan		ft. n. of s.
lupper	Washington.	Michigan		17 ft. n. of s. line.
Cousey	Sycamore	Champlin	4 R	25 ft. w. of e. line.
Union	Fagle	Clinton	4	17 ft. e. of w. line.
Juion	Clinton	William .	6 R	17 ft. w. of e. line.
Urban alley.	North	High		11 ft. e. of w. line.
Utica	Main	Jefferson.	H 9	26 ft. n. of s. line.
Jtica	lefferson	Dupont		41 ft. s. of n. line.
Jtica	Dupont	Hauff	_	41 ft. s. of n. line.
Vandalia	South	Railroad	4 ~	22 ft. e. of w. line.
Van Rensselaer	Seneca	Porter	4 \	20 ft. w. of e. line.
Van Rensselaer	Seneca	Elk	6 R	20 ft. w. of e. line.
/ary.	Spring	Jefferson		21 ft. s. of n. line.
/irginia	Jeffersor	Cherry	_	23 ft. n. of s. line.
/inginia	Cherry	Rose	_	4 ft. n. of s. line.
Walden avenue	Best	Williamsville road	10 H	24 ft. n. of s. line.
Walden avenue	Bailey avenue	780 feet west of City line		II ft. s. of n. line.
Walden avenue	End of 10-inch pipe.	559 feet easterly		II ft. s. of n. line.
Walnut	Genesee	Eagle	_	40 ft. w. of e. line.
Washington	Exchange	Tupper		41 ft. e. of w. line.
Washington	Ohio	Exchange		
Washington	Exchange	Ohio	12 R	41 ft. c. of w. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	ç	Size of Pipe, Inches,	System	Location.
Washington	Exchange	Genesee	9	~	38 ft. e. of w. line.
Washington.	Tupper	500 feet southerly .	9	~	ft. w. of
Washington.	Tupper	350 feet northerly	9	~	39 ft. w. of e. line.
Washington.	Goodell	High	9	Ξ	38 ft. w. of e. line.
Washington	Tupper	Goodell	12	I	42 ft. w. of e. line.
Walter	EIK	Perry	9	~	25 ft. w. of e. line.
Walter	Репу.	Seneca	9	~	33 ft. w. of e. line.
Watson	Clinton	Broadway	9	~	18 ft. e. of w. line.
Waverly	Ferry	Railroad avenue	9	Ξ	28 ft. e. of w. line.
Weaver alley	Goodell	Virginia	4	H	14 ft. w. of e. line.
Welker	Utica	Glenwood	4	=	15 ft. e. of w. line.
Wells	Seneca	Exchange	4	~	27 ft. e. of w. line.
West Bennett	Clinton	William.	4	~	26 ft. e. of w. line.
West Parade avenue	Northampton	300 feet southerly.	9	~	20 ft. e. of w. line.
William	Michigan .	Pratt	0	2	27 ft. s. of n. line.
William	Pratt	122 feet east of Madison	9	~	39 ft. n. of s. line.
William	Jefferson	Adams	2	×	42 ft. s. of n. line.
William	Emslie .	766 feet easterly.	9	~	30 ft. s. of n. line.
William	Adams	N. Y. C. R. R.	2	~	32 ft. s. of n. line.
William	N. Y. C. R. R.	Williamsville road	12	~	40 ft. s. of n. line.
William	North Ogden	South Ogden	9	~	23 ft. s. of n. line.
Williamsville road	William	1,275 feet north of Broadway	12	~	42 ft. e. of w. line.
Williamsville road	Clinton .	William	2	~	38 ft. e. of w. line.
Wilson	Sycamore	Genesee	9	Ξ	15 ft. e. of w. line.
Wilson	Sycamore	Broadway	. 9	24	14 ft. e. of w. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

WEST SIDE.

Sirect	From	t.	Size of Pipe, Inches	System.	Location of Pipe.	
Albany	Niagara	West avenue	9	<u>×</u>	40 ft. n. of s. line.	
Albany	West avenue.	Hampshire	9	×	ft. n. of s.	
Allen	Main	Wadsworth	7	H	ft. n. of s.	
Amherst .	Niagara	Military road	9	~	ft. s. of n.]	
Amherst .	Military road	N. Y. C. R. R.	9	~	22 ft. s. of n. line.	
Anderson place	Richmond avenuc	Ashland avenue	9	I	38 ft. s. of n. line.	
Anderson place	Ashland avenue	Elmwood avenue.	9	I	ff. s.	
Arkansas	West avenue.	Herkimer	9	H	22 ft. n. of s. line.	
Arkansas	Herkimer	Grant	9	Ξ	44 ft. s. of n. line.	
Arlington place	North	Park	9	H	3 ft. w. of e. line.	
Ashland avenue	Bryant.	830 feet southerly.	9	Ξ	40 ft. w. of e. line.	
Ashland avenue	Ferry	Butler	9	Ξ	21 ft. e. of w. line.	
Ashland avenue	Ferry	Auburn avenue.	9	H	27 ft. e. of w. line.	
Auburn avenue	West avenue	Gelston	*	~	27 ft. s. of n. line.	
Austin	Niagara.	Tonawanda.	. 2	~	40 ft. s. of n. line.	
Balcom	Main	Michigan	9	H	41 ft. n. of s. line.	
Balcom	Michigan	525 feet westerly	9	H	24 ft. s. of n. line.	
Barker	Main	75 feet westerly.	4	H	13 ft. n. of s. line.	
Barton	Breckenridge.	120 feet southerly.	8	~	5 ft. w. of e. line.	
Barton	Arkansas	California	9	H	27 ft. e. of w. line.	
Baynes	Ferry	Bouck avenue	9	H	f. e.	
Bean alley	Huron.	170 feet southerly	4	~	e. of w.	
Bird avenue	West avenue	Grant	9	2	24 ft. s. of n. line.	
Bird avenue	Niagara.	West	9	2	ft. n. of s.	
Bouck avenue	Niagara	Dewitt	9	~	43 ft. s. of n. line.	
Pouch ansuna	Harbimer	Thelewore exenue	2	–	9	

Street	From	£	Size of Pipe, Inches.	System.	Location of Pipe.
Bouck avenue	Dewitt	Herkimer	9	2	48 ft. s. of n. line.
Bouck avenue	Delaware avenue	Main	9	=	ft. s. of
Brayton	Vermont	Rhode Island	9	=	32 ft. w. of e. line.
Brayton	Rhode Island	Massachusetts	9	=	ft. e. of w.
Breckenridge	Niagara	Railroad	9	~	ft. n. of s.
Breckenridge.	Niagara	West avenue	91	~	25 ft. s. of n. line.
Breckenridge.	West avenue	Dewitt.	4	~	ft. s. of n.
Breckenridge .	Dewitt	Barton	9	~	25 ft. s. of n. line.
Bremen	Vermont	Rhode Island	9	Ξ	w. of e.
	Linwood avenue	Howard avenue	9	=	n. of s.
	Elmwood avenue	250 ft. west of Ashland ave.	9	Ξ	s. of n.
Bryant, N. S.	Richmond avenue.	210 fect easterly.	9	Ξ	ft. s. of n.
Bryant	Richmond avenue	Howard ave	9	I	13 ft. n. of s. line.
Butler	Richmond avenue.	Delaware avenue	9	Ξ	ft. s. of n.
California	West avenue.	Herkimer	÷	Ξ	ft. n. of s.
Canal	Erie.	Commercial	9	~	ft. s.
Сапа	Lloyd	60 ft. easterly	4	2	ft. n. of s.
Carolina	Erie canal	Sixth	4	×	ft. s. of n.
Carolina	Sixth	Niagara	9	2	35 ft. s. of n. line.
Carolina	Prospect avenue	Tupper	9	~	ft. n. of s.
Carolina	Niagara	Prospect avenue	9	2	ft. s. of n.
Cary	Lot line bet. lots 171 and 172	280 feet west of Morgan	4	~	ft. n. of s.
Chapin parkway	Clinton avenue	Delavan avenue	8	Π	ft. w. of e.
Chapin parkway.	Soldiers' place	Delavan avenue	9	×	ft. e. of w.
Chenango.	Utica	Ferry	9	I	نے
Chippewa	Franklin	Georgia	9	24	ft. n. of s.
Chippewa	Main	Franklin	9	H	31 ft. n. of s. line.
Church	S. Terrace.	Delaware avenue	01	~	

Jackson Austin Norris place West avenue Herkimer Richmond avenue Chapin parkway 500 feet easterly North Water Delavan avenue Fargo avenue Prospect avenue Prospect avenue Prymouth avenue Richmond avenue Richmond avenue Richmond avenue Pymouth avenue Richmond avenue Richm	ue kway kway		، ن	4 H 16 ft. w. of e. line.	6 R 24 ft. s. of n. line.	6 R 23 ft. s. of n. line.	20 H 24 ft. n. of s. line.	20 H 37 ft. s. of n. line.	ď		1: C. C. II.	48 It. e. of w.	6 H 23 ft. e. of w. line.	- Si	4 H 15 ft. s. of n. line.	ft. s. of n.	. 16 II Io ft. n. of s. line.	6 II 38 ft. s. of n. line.	H 30 ft. n. of s.	R 30 ft. n. of s.	ft. n. of s. 1	R 35 ft. n. of s.	ft. n. of s.	`.	ft. e. of w.	'n	ft. e. of w.	ft. w. of e.	4 R 20 ft. s. of n.	. 20 H 22 ft. n. of s.	33 ft. s. of n.	12 ft. s. of n.	`.	R 58 ft. e. of w.	H 58 ft. e. of w. l	41 ft. w. of e.	:
	S. Terrace Amberst Cottage Niagara West avenue Herkimer Richmond avenue Chapin parkway Cottage Terrace Clinton avenue France Clinton avenue France Mariner Mariner Man) ackson.	Austin	Norris place	West avenue	Herkimer	Richmond avenue	. Chapin parkway	500 feet easterly	North	TAY TAY	Water	Delavan, avenue	Prospect avenue	Fargo avenue	West avenue	Plymouth avenue	Richmond avenue		Terrace	Pearl	Terrace	Georgia	Bradiey	Bradley	Prime	350 feet northerly	Hertel avenue.	300 feet easterly.	250 st. east of Delaware a	West avenue	Congress	Niagara	Chippewa	Virginia.	North	20.01

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	ŗ.	Size of Pipe, Inches.	System.	Location of Pipe.
Delaware avenue	775 feet north of Ferry	Chapin place	9	=	16 ft. w. of e. line.
I)elaware place	Delaware avenue	Virginia	4	H	ft. n. of s.
I)ewitt	Breckenridge	Bouck avenue	4	×	ft. w. of e.
Dewitt	Bouck avenue	Forest avenue	9	2	ft e. of w.
Dewitt	Forest avenue	Bradley	4	2	19 ft. w. of e. line.
Eagle	Main	Pearl	•	H	ft. n. of s.
Eagle	Franklin	Morgan	4	×	ft. s. of n.
Fagle	Main	Pearl	2	×	ft. n. of s.
Eagle	Pearl	Franklin	9	Ξ	ft. n. of s.
East	Parish	Farmer	91	×	ft. e. of w.
East	Farmer	Hertel avenue	91	×	ft. e. of w.
Edward	Virginia	220 ft. e. of I)elaware ave.	4	H	نے
Efner	Georgia	Carolina	9	×	ft e. of w.
Efner	Carolina	Maryland	4	×	32 ft. w. of e. line.
Efner	Maryland	Hudson	9	×	33 ft. w. of e. line.
Eighteenth	Connecticut	Vermont	9	H	
Fighteenth	Rhode Island	Massachusetts	9	Ξ	
Eighteenth	Massachusetts	Hampshire	9	Ξ	ft. e. of w.
Elmwood avenue	Hodge avenue	Utica	9	H	نے
Elmwood avenue	Ferry	Auburn avenue	9	Ξ	
Erie	Main	Terrace	9	=	ft. n. of s.
Frie	Terrace	Water	9	×	ft. n. of s.
Erie	Water	Buffalo River	•	×	ft. s. of n.
Erie	Main	Pearl	01	2	ft. n. of s.
Essex ,	Massachusetts	200 feet southerly	9	=	ft. e. of w.
Express	Pearl	125 feet westerly	9	Ξ	ft. n. of s.
Fargo avenue	Connecticut	270 feet southerly	4	=	e. of ₩.
Fargo avenue	Connecticut	Hampshire	9	H	38 ft. w. of e. line.

THE BUFFALO CITY WATER WORKS

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	enne .	way of Yor erly	erly
Niagara Pennasylvania Porter avenue Gurnsey Grant Grant Niagara	Richmond avenue Richmond avenue Richmond avenue Remont Rhode Island . Hampshire . Pennsylvan'a .	Niagara West avenue Lincoln parkwa Lamine place Order avenue Go feet north of Go feet north of Go feet souther Rhode Island Hampshire Go feet souther Whayland Swan Chippewa	Soo feet north Tupper North North Jersey
Viagara ennsy orter a purnsey conawa irant . Viagara	E B B E C		Cort North
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			Chippewa.
<u>2</u>		uue	orth of Chippewa.
Hampshire	renue	u u u u u u u u u u u u u u u u u u u	ewaet north of Chippewa.
<u>2</u>		uue	orth of Chippewa.
<u>2</u>		uue	orth of Chippewa.
Hampshire Hudson Fersey Niagara Gurnsey Herkimer Erie Canal		Erie Canal Niagara Niagara West avenue Watsworth Wadsworth Porter avenue Gonnecticut Fonnecticut Rhode Island Genese Genese Garolina Virginia Terrace Swan Eagle Gons	Chippewa
<u>2</u>	West avenue Main Nork Vermont North Nembor North North North State	Eric Canal Niagara Niagara Niagara Niagara Niagara Niagara Nest avenue Nest avenue Carolina Nadsworth Porter avenue Somecticut Nadsworth Nadswor	orth of Chippewa.

Street.	From	To	Size of Pipe, Inches.	2).etem	Location of Pipe.
Front avenue	Rhode Island	216 ft. south of Connecticut.	9		ft. w. of e.
Front avenue	Stand Pipe	Niagara	2 ;		it. w. of e.
Gelston	Ferry	Bouck avenue.	4 4		ft. w. of e.
Genesee	Main	Pearl	4		ft. n. of s.
Genesee	Pearl	Franklin	4,		ft. s. of n.
Cenesee	Niagara	Fast line of C. R. R.	ی د	× ×	31 ft. n. of s. line.
Georgia	Chippewa		9		ft. s. of n.
Georgia	Niagara	Sixth	4	_	ft. s. of n.
Georgia	Sixth	Court	•	_	ft. n. of s.
Georgia	Court	C. R. R. Round House	<i>رى</i> ،		ft. s. of n.
Corton	Amherst	Hertel avenue.	۰,		it. e. of ₩.
Grant	Ferry	Amold	o v		ff. e. 01 W.
Grant.	Bouck avenue.	Auburn avenue	• •		ft. e. of w.
Gull	Niagara	Railroad	4		ft. n. of s.
Hamilton	East	Tonawanda	9		ft. s. of n.
Hamilton	Niagara	East	•		ft. n. of s.
Hampshire	Prospect avenue	Plymouth avenue.	۰ م		ft. s. of n.
Hampshire	I hirteenth	Ferry	٠;		46 ft. s. of n. line.
Honover	Moin	Demo	1.		11. 3. Of 11.
Henry	Terrace	Frie Canal	4.0		# E C C
Herkimer	Albany	Ferry	4		ft. w. of e.
Herkimer	Ferry	Bouck avenue	7		ft. w. of e.
Herkimer	Bouck avenue	Clinton avenue	8		ft. w. of
Hertel avenue	Niagara	East	•		ft. s. of n.

Hodge avenue	Delaware avenue	Ashland avenue	9 -	H	22 ft.	n. of s.		
Hoffman alley	Hamilton	Southerly	<u>.</u>	≃:	33 ft.	w. of e.		
Hodge street	\ ermont	Rhode Island	۰ -	I	19	¥. c.	ine.	
Howard ayenue	Bryant	Summer	• -		₹	w. of e	. line.	
Howard avenue	Butler	Ferry	• -	I	23 ft.	e. of w	. line.	
	Bouck avenue	Breckenridge	9 -	I	20 ft.	e. of w	. line.	
	Niagara	West avenue	01	2	77 E	s. of n.		
	West avenue	Cottage	01	H	42 ft.	n. of s	. line.	
	Cottage	Wadsworth	9	H	42 ft.	n. of s	. line.	
•	Sixth	Erie Canal	4	*	23 ff.	n. of s	. Jine.	
	Franklin	Delaware avenue	4	~	30 ff.	n. of s.	· line.	
•	Delaware avenue	Prospect avenue	•	2	30, ff.	n. of s	. line.	
	Pearl	Niagara	. 12	×	21 ft.	n. of s	. line.	
rving place	Allen	North	9	Ħ	32 ft.	c. of w	line.	
	Genesee	Court place	4	~	28 ft.	w. of e.		
•	Front avenue	Porter avenue	91 .	H	27 ft.	s. of n	. line.	
	Front avenue.	Lakeview avenue	01	2	43 ft.	s. of n	. line.	
	Prospect avenue	West avenue	9	H	29 ft.	s. of n	line.	
	Porter avenue	Richmond avenue	91	Ξ	27 ft.	s. of n	line.	
	Fourteenth	200 feet easterly	9	H	20 ft.	s. of n	. line.	
	Lakeview avenue	Canal	9	~	43 ft.	s. of n	. line.	
	Seneca	Pearl	4	H	10 ft.	e. of w.	. line.	
ohnson place	Delaware avenue	Carolina	4	2	24 ff.	s. of n.	. line.	
Ketchum place	Jersey	York	9 -	H	35 ft.	w. of e.	. line.	
Kremlin alley	Eagle	125 ft. southerly	→	H	7 ft.	w. of e	e. line.	
ake View avenue	Pennsylvania	Porter avenue	9	24	40 F	e. of ₩	. line.	
incoln parkway	Forest avenue	South line of Park	9	~	90 FF	e. of *	line.	
inwood avenue	North	. Fепту	9	Ξ	43 ft.	w. of €	e. line.	
inwood avenue	Ferry	Delavan avenue	•	Ξ	48 ft.	w. of	. line.	
	Main	South end of bridge	4	~	26 ft.	e. of	w. line.	
	South end of bridge	Prime	• 	2	26 ft.	e. of	'. line.	
	Vernon	Russell	4	Ξ	9 ff.	e. of	. line.	
	Virginia	North	9	H	30 14	e. of	. line.	
• • • • • • • • • • • • • • • • • • • •	Seventh	100 feet west of fourth	<u>.</u>	~	29 ft.	n. of	. line.	
	Tenth	West avenue	9	×	25 ft.	n. of	. line.	
	West avenue	Twelfth	9 	<u>~</u>	41 ft	s. of n	n. line.	

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Nireet.	From	J.o.	Size of Pipe, Inches,	System —	Location.
Maryland	Cottare	College	و	30 ff	s. of n. line.
Maryland	Niagara	Seventh	9	Z 20 ff.	of s.
Maryland	Niagara	Prospect avenue.	9	R 41 ft.	Ė
Massachusetts	Front	Seventh	9	_	n. of s. line.
Massachusetts	Seventh	Niagara	8	H 46 ft s	of n. line
Massachusetts	Niagara	Prospect avenue	9	H 41 ft.	s. of n. line.
Massachusetts	Prospect avenue	Fargo avenue	9	40 ft.	s. of n. line.
Massachusetts	Plymouth avenue	Fourteenth	•	H 38 ft.	s. of n. line.
Massachusetts	Fargo avenue	Plymouth avenue	•	H 26 ft.	n. of s. line.
Massachusetts	Fourteenth	Richmond avenue	9	H 26 ft.	n. of s. line.
Mechanic	Terrace	Canal	9	34 ft.	n. of s. line.
Michigan	Balcom	300 feet northerly	9	H 25 ft.	w. of e. line.
Michigan	Bouck avenuc	Delavan avenue	9	H 45 ft.	w. of e. line.
Military road	Amherst	Austin	9	R 29 ft.	w. of e. line.
Military road	Austin	Hertel avenue	9	R 29 ft.	w. of e. line.
Mohawk	Main	Niagara	9	R 36 ft.	s. of n. line.
Mohawk	Niagara	Wilkeson	4	R 24 ft.	n. of s. line.
Morgan	Chippewa	Mohawk	4	R 41 ft.	w. of e. line.
Morgan	Niagara	Eagle	4	R 26 ft.	e. of w. line.
Niagara	Main	250 ft. north of Connecticut.	91	R 61 ft.	e. of w. line.
Niagara	250 ft. north of Connecticut	Rhode Island	24	H 18 ft.	w. of e. line.
Niagara	Connecticut	Massachusetts	9	H 12 ft.	e. of w. line.
Niagara	Massachusetts	Front avenue	9	R 65 ft.	e. of w. line.
Niagara	Front avenue	Breckenridge	91	R 20 ft.	w. of e. line.
Niagara	Albany	Forest avenue	4	R 19 ft.	e. of w. line.
Niagara	Breckenridge.	300 feet northerly	4	R 19 ft.	w. of e. line.
Niagara	Bouck avenue	250 feet southerly.	4	R 19 ft.	w. of e. line.
Niagara	Bouck avenue	Forest avenue	4	10 ft.	w. of e. line.

Niagara.	Forest avenue	Parish 16	- 24 -	18 ft. w. of e. line.
Niagara	Amherst	Parish 6	~	
Niagara	Amherst	City line 6	~	39 st. w. of e. line.
Ninetecnth	Rhode Island	Massachusetts 6	H	w. of. e.
Norris place	Cottage	Wadsworth 4	Ξ	15 ft. s. of n. line.
North	Main	enue I	H	31 ft. n. of s. line.
North Pearl	Virginia	North 6	Ξ	28 ft. e. of w. line.
Norton	Water	Peacock 6	×	ä
Orton place	Hudson	Pennsylvania 6	=	18 ft. e. of w. line.
Parish	Niagara	East	~	40 ft. s. of n. line.
Park	Virginia	North 6	Ħ	ft. e. of w.
Park place	Delaware avenue	Johnson place 4	~	ft. n. of s.
Peacock	Erie	Norton 6	~ ~	ft. s. of n.
Pearl	Commercial	Terrace 4	×	24 ft. w. of e. line.
Pearl	Terrace	Court 6	H	40 ft. w. of e. line.
Pearl	Terrace	200 feet northerly 6	<u>~</u>	14 ft. w. of e. line.
Pearl	Court	Genesee 4	- =	36 ft. e. of w. line.
Pearl	Genesee	Tupper 4	H	29 ft. e. of w. line.
Pearl	Virginia	250 feet southerly 4	H	22 ft. w. of e. line.
Pearl	Terrace. 1	Niagara 10	~	26 ft. e. of w. line.
Pearl	Niagara	Huron 12	_ ~	24 ft. e. of w. line.
Pennsylvania	Niagara	175 feet west of Fourth 6	~	24 ft. n. of s. line.
Pennsylvania	Prospect avenue	150 feet easterly 4	Ħ	24 ft. n. of s. line.
Pennsylvania	West avenue	Plymouth avenue 6	~	25 ft. n. of s. line.
Pennsylvania	Plymouth avenue	Wadsworth 6	I	25 ft. n. of s. line.
Pennsylvania	Fifth	250 feet westerly 3	*	12 ft. n. of s. line.
Plymouth avenue	Hudson		H -	25 ft. e. of w. line.
Plymouth avenue	Porter avenue	-	=	38 ft. w. of e. line.
Plymouth avenue	Connecticut	Rhode Island 6	Ħ	41 ft. w. of e. line.
Pymouth avenue.	Khode Island	tts	Ħ	25 ft. e. of w. line.
Plymouth avenue	Massachusetts	Hampshire 6	Ħ	43 ft. w. of e. line.
Plymouth avenue	Hampshire	School 6	Ħ	25 ft. w. of e. line.
orter avenue	Sixth	200 feet west of Fourth 4	 ≃	21 ft. n. of s. line.
Porter avenue	Sixth	Seventh 6	~	22 ft. n. of s. line.
Porter avenue	Seventh	nue	I	ft. n. of s.
Porter avenue	Prospect avenue	West avenue 20	=	8 ft. n. of s. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System

	From	To	Size of Pipe, Inches.	System	Location of Pipe.
Porter avenue	West avenue	Fourteenth	7	 	ft. n. of s.
Porter avenue	Prospect avenue	West avenue	. 4	 ~	o
Porter avenue	Fourteenth	The Circle	12	Ξ	n. of s.
Porter avenue	Jersey	Fourteenth	12	Ξ	30 ft. n. of s. line.
Prime	Main	Hanover	4	~	ft. e. of w.
Prospect avenue	Huron	Hudson	•	2	e. of w.
Prospect avenue	Hudson	Porter avenue	9	Ξ	w. of e.
Prospect avenue	Porter avenue	Vermont	7	2	w. of e.
Prospect avenue	Porter avegue	Connecticut	20	H	e. of w.
Prospect avenue	Connecticut	Vermont	4	H	w. of e.
Prospect avenue	Vermont	Hampshire	9	Ξ	42 ft. w. of e. line.
Prospect avenue	Hampshire	Niagara	9	~	w. of e.
Penfield.	West avenue	250 feet westerly	9	24	ft. s. of n.
l'ublic alley	lersey	Fourteenth	4	Ξ	s. of n.
Khode Island	Sixth	Niagara	•	Ħ	of n.
Khode Island	Prospect avenue	Richmond avenue	9	Ξ	of s.
-	Jersey	Forest avenue	91	H	of w.
	Ferry	Butler	4	I	of e.
and avenue, east side .	Butler	Anderson place	9	H	of e.
Kiver	Frie	Peacock slip	9	<u></u>	of w.
	Main	Franklin	4	I	of n.
• • • • • • •	Main	Terrace	12	~	of s.
	Main	100 feet westerly	9	~	of s.
	Fargo avenue	Prospect avenue	9	- ~	40 ft. n. of s. line.
	Fargo avenue	Plymouth avenue	 • -	I	40 ft. n. of s. line.
Seventeenth	Vermont	Connecticut	9	H	22 ft. e. of w. line.
Seventeenth	Richmond avenue	Connecticut	9	I	ه
Seventh	Court	Massachusetts	36	~	24 ft. w. of e. line.

33 ft. e. of w. line. 40 ft. w. of e. line. 26 ft. e. of w. line.	ہ نه پے پے	ft. w. of e.	24 ft. e. of w. line. 21 ft. e. of w. line.	ft. e. of w.	ft. e. of w.]	¥. of e.	24 ft. w. of e. line. 48 ft. w. of e. line.	ft. e. of w.	ft. s. of n.	47 ft. n. of s. line.	ft. n. of s.	s. of n.	ft. w. of e.		ft. c. of w.	27 ft. s. of n. line.	13 ft. w. of e. line.	ff. ₩. of	S across	38 ft. w. of e. line.	13 ff. e. of w. line.	44 ft. w. of c. line.	ft. w. of e. 1	20 ft. e. of w. line.		21 ft. s. of n. line.
XX	H×	H		H	Ξ:	= 0	4 &	≃'	Ξ:	ΞΞ	H	Ξ.	× :	4 2	2	X	~ [— ج د	4:	= =	=	Ξ	Ξ.	~ (~ 6	* *
4.0 4	~ ~ <u>~</u>				9.	9 v	o 8	4	4	4.0	9	9 -	9	, 2	۲ 	9	9	4	۰	• 	- 4 ·c	• •	9	• •	01	
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Georgia Porter avenue Vermont	Rhode Island	Massachusetts	Front avenue.	Arkansas	Utica	Vermont	Carolina Porter avenue	Water	225 feet westerly	325 feet casterly.	100 feet westerly	Pearl	Hudson	Mechanic	Main	Main	Daw alley	275 feet southerly	Evans	Jersey	390 feet southerry Rhode Island	Massachusetts .	Hampshire	Farmer	Niagara	Virginia
					•	•		•	•		• •	•	· · · · · · · · · · · · · · · · · · ·	· · ·		•		•	•				•		· · ·	· · · · · · · · · · · · · · · · · · ·
Wilkeson Georgia	Vermont	Rhode Island	Massachusetts Store-house	Hampshire	Massachusetts .	York	Court	Canal	Wadsworth	Orton place	Howard avenue.	Main	Carolina	Court	Seneca	Pearl	Eagle	Court	Franklin	Fennsylvania	Vork	Rhode Island	Massachusetts .	Amherst	Amherst	Delaware avenue Main
• • •			•		•	•		•	·	•		•	•			•					•		•			: :

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

System. Location.	H 28 ft. w. of n. line 28 ft. w. of e. line. 27 ft. n. of s. line. H 19 ft. n. of s. line. H 14 ft. s. of n. line. H 14 ft. s. of n. line. H 19 ft. n. of s. line. H 19 ft. n. of s. line. H 27 ft. n. of s. line. H 25 ft. n. of s. line. K 39 ft. n. of s. line. K 25 ft. n. of s. line. K 39 ft. n. of s. line. H 16 ft. e. of w. line. H 16 ft. e. of s. line. H 16 ft. e. of s. line. S s.
Size of Pipe, Inches.	400 40 4000000 40 mg 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Street. Street. To Fipe, and on while Size of E. From From To Fipe, # Location.	Soo feet westerly Maryland Linwood avenue 125 feet west of Elmwood 125 feet westerly Chenango Eighteenh Shields avenue Massachusetts West avenue Front avenue Sevenh Sevenh Front avenue Franklin Main West avenue Franklin West avenue Franklin Wast avenue Front avenue Front avenue Prospect avenue
From	Delaware avenue Virginia Main Linwood avenue Elinwood avenue Elinwood avenue Elinwood avenue Chenango Eighteenth Shields avenue Richnond avenue Richnond avenue Seventh Nest avenue Prospect avenue Seventh Niagara Niagara Cottage Franklin Tupper West avenue Franklin Tupper Franklin Tupper Franklin Tupper Cottage Franklin Tupper Franklin Tuppe
Street, Street.	Tupper Twelfth Lica Lica Lica Lica Lica Lica Lica Lica

4 ; 31 ft. w. of e. line.	20 ft. w. of e. line.	2 39 ft. e. of w. line.	I 51 ft. w. of e. line.	1 38 ft. w. of e. line.	1 26 ft. e. of w. line.	22 ft. e. of w. line.	24 ft. e. of w. line.	1 27 ft. e. of w. line.	28 ft. e. of w. line.	1 27 ft. n. of s. line.	24 ft. w. of e. line.	2 37 ft. e. of w. line.	25 ft. s. of n. line.	40 ft. n. of s. line.	27 ft. s. of n. line.	I 43 ft. s. of n. line.
_	_	_		_		-			<u></u>	_		_		_		1
9	9	20	4	9	16	9	91	9	9	9	4	9	2	4	4	9
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Twentieth Annual Report



BUFFALO CITY WATER WORKS



1888

& BIFFALO PUB, LIE

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TWENTIETH

ANNUAL REPORT

OF THE

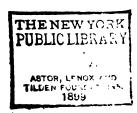
COMPLIMENTS OF THE

Buffalo Water Commissioners.

PLEASE EXCHANGE.

THE YEAR 1888.







BUFFALO, N. Y.

ART-PRINTING WORKS OF MATTHEWS, NORTHRUP & Co.

Office of the "Buffalo Morning Express."

1889.

OFFICERS-1888.

Board of Water Commissioners,
LOUIS P. REICHERT, Chairman.
JAMES RYAN. Secretary.
S. K. WORTHINGTON.

Superintendent and Engineer,
LOUIS H. KNAPP.

Registrar,
JOHN T. REES.

Chief Engineer of Steam Power.

PATRICK BRENNAN.

Commissioners' Report.

To the Honorable The Common Council of the City of Buffalo:

In compliance with the requirements of the Charter, we have the honor to present herewith the twentieth annual report of the Buffalo City Water Works.

The department in all its branches is in good serviceable condition and the pumping works are in the best of order, no breaks of any serious nature have occurred during the year, and the supply of water at all times has been good.

REVENUE.

The total amount received by the Water Department for the year ending December 31, 1888, was \$494,777.52; this is an increase of \$18,365.65 over the previous year. This increase of revenue is especially gratifying to the Commissioners, as water rates to domestic consumers were reduced 10 per cent. on house rates and 33½ per cent. on bath tubs, the total reduction in rates made during the past seven years to domestic consumers is 50 per cent.

The total requirements of the department for 1888 we divide into two classes, classified as Regular and Extraordinary, as follows, viz.:

REGULAR.

Interest on bonded debt,	\$168,185.49
Maintenance and repairs, including fuel,	143,125.76
Improvements and extensions, including small	
mains, etc.,	170,623.32
Total,	\$481,934.57

The maintenance and repairs includes the purchase of 14,730 tons of coal during the year, of which there was on hand January 1, 1889, 9,069 tons, valued at \$35,097.03. The large quantity on hand is owing to the use of natural gas for fuel, which was used to displace coal, and was equal to 3,288 tons.

EXTRAORDINARY.

New line of 36-inch main from pumping station	
to the eastern part of the city,	\$116,885.70
36-inch main up the hill,	8,612.25
New boilers, chimney and setting boilers,	10,231.09
Payment on new Gaskill pumping engine,	75,000.00
Retaining wall and excavating and removing dirt,	7,157.96
Enlarging shaft in Inlet Pier and removing bulk-	
heads in the tunnel,	24,828.97
Purchase of land (lower pump house),	10,100.00
Electric light and telephone cables to Inlet Pier,	1,330.30
Ice elevator (shore shaft),	1,263.94
Preliminary work — Dodge Farm,	2,472.15
Total,	\$257,882.36

While the extraordinary outlay of \$257,882.36 is a large expenditure, it will meet the requirements of the department for time to come. With yearly extension of mains amounting to 151 miles during the past eight years, it became necessary to lay large supply mains to the eastern part of the city and provide additional pumping engines to supply water to distant points from the pumping station.

INLET PIER AND TUNNEL.

Extensive improvements were made on the Inlet Pier and Tunnel during the year; the shaft in the Pier was enlarged from four feet to six feet in diameter, thereby nearly doubling its capacity. With enlarged openings it became necessary to remove the bulkheads in the Tunnel—one near Bird Island Pier and one near the shore shaft at the pumping station. These bulkheads were placed in the tunnel at the time of its construction, with openings regulated by gates for the purpose of closing off the water, if necessary, the openings in the bulkheads being of the same area as the shaft in the Inlet Pier. It became necessary, owing to the increased consumption of water, to enlarge the shaft and remove the bulkheads. This was successfully done by contract, at a cost of \$24,828.97.

The present estimated capacity of the Tunnel is not less than 100,000,000 gallons each twenty-four hours.

While these improvements were being made, electric light and telephone cables were run through the Tunnel to the Inlet Pier, at a cost of \$1,330.30; the pier now being lighted by electricity, thereby avoiding daily trips to the pier in a row-boat for the purpose of keeping the lamp lit and in order.

An ice elevator was constructed at the shore shaft at a cost of \$1,263.94 to remove the ice from the shaft and tunnel during the winter. The accumulation of slush ice at this point has often seriously obstructed the flow of water to the wells where the pumps take suction.

LOWER PUMPING STATION.

At the north side of the pumping station the roof has been raised and a good substantial building constructed, at a cost of \$22,622.15, in which the new Gaskill Pumping Engine is located, complete and ready for trial.

A retaining wall was also constructed along the eastern portion of the land recently purchased; the cost of the wall and removing dirt was \$7,157.96.

In addition to the present steam boilers, a battery of four new cylinder boilers has been added, together with a new chimney, at a cost of \$10,231.09.

UPPER PUMPING STATION.

No extensive additions were made at this station, the buildings, pumps, and all other attachments are in the best of order, the only addition to plant being the purchase of a new marine boiler. Since May last natural gas for fuel has been used, at the same cost as coal.

LAND PURCHASED.

In conformity with our recommendation to your Honorable Body under date of June 18, 1888, same being approved

of, the strips of land adjoining the property of the City, upon which is located the Lower Pumping Station, was purchased from Matthew McComb and Agnes Warren at a cost of \$10,100.00. The land thus acquired adds greatly to the requirements of the department; the total frontage upon railroad and canal is now 800 feet.

Plans are being perfected to have railroad tracks run in. The want of railroad facilities for receiving coal, etc., by rail has long been felt, as now we are obliged to store large quantities during the season of canal navigation, or haul the same by teams.

NEW PUMPING ENGINE.

The new Gaskill compound pumping engine, with four boilers and foundation for engine, contracted for with the Holly Manufacturing Company, Lockport, N. Y., for the sum of \$94,750, is fully completed and set up, acceptance of engine pending its trial tests. By the terms of the contract there has been paid to the contractors the sum of \$75,000.

WATER MAINS.

There was laid during the year 21 miles 1,250 feet of water pipes of various sizes, at a cost of \$240,715.14, as follows, viz.:

1 1/2	inch,							60 feet.
2	inch,							1,561 feet.
3	inch,							1,250 feet.
4	inch,							2,717 feet.
6	inch,							69,392 feet.
10	inch,							8,786 feet.

I 2	inch,							86o	feet.
16	inch,							11,391	fect.
20	inch,							3,199	feet.
36	inch,			٠.				12,914	feet.
	Total							112 120	feet

The total length of water pipe in the City January 1, 1889, was 252 miles 403 feet, and, excepting the large supply mains, nearly all pipe during the year was laid in the 5th, 6th, 7th, 11th, 12th, and 13th Wards.

A large supply main, 36 inches in diameter, contemplated to be extended to the eastern portion of the city, was laid from the pumping station, through Massachusetts Street, to Prospect Avenue, to Huron Street, to the corner of Sycamore Street. This supply main will be extended during the coming year through Sycamore Street, to Pratt Street, to Broadway, to Spring Street, to Peckham Street, to Fillmore Avenue.

The small mains in the following named streets were taken up and replaced by larger ones, viz.:

Ferry Street, from Jefferson Street, to end of pipe,	495	feet.
Genesee Street, from Main Street to Oak Street,	1,345	feet.
Genesee Street, from Michigan Street to Jefferson		
Street,	5,642	feet.
William Street, from Pratt Street to Jefferson		
Street,	890	feet.
-		
Total,	8,372	feet.

FIRE HYDRANTS.

There was set in 1888 on new line of mains one hundred and forty-six hydrants, making the total number in use two thousand two hundred and eighty-four.

SERVICES.

There was put in during the year three thousand one hundred and ninety-two taps, making a total in the city December 31, 1888, of thirty-two thousand six hundred and fifty-nine.

BONDED DEBT.

The funded debt of the Water Department was increased \$332,500.00 during the year, bonds for the extension of the water supply of the city was authorized to be issued by acts of the Legislature for the sum of \$557,500.00, of which sum there was issued \$332,500.00 for the purpose of laying a 36-inch main, pay for the new engine, boilers, etc. There remains unissued \$225,000.00.

While new bonds have been issued, increasing the water debt, the total being, January 1, 1889, \$3,110,382, the interest account is not correspondingly increased, as \$200,000.00 of bonds bearing 7 per cent. interest were refunded at a lower rate of interest, viz., 3½ per cent.

The new issue of bonds, together with those refunded, were sold at a premium of \$39,253.35.

There will come due during the year \$145,000.00 of 7 per cent. bonds, and we recommend that they be refunded at a lower rate of interest.

DODGE FARM.

This property was purchased by the city in 1874 in contemplation of being wanted as a site for storage and distributing reservoir. In our last report we recommended the construction of a storage and distributing reservoir on this property, and under date of February 6, 1888, a special communication was transmitted to your Honorable Body, giving our views more fully. This communication was referred to the Water Committee, and the following report made by your committee was adopted:

"That the Water Commissioners be directed to have the necessary plans and specifications prepared for a collecting and distributing reservoir on the Dodge Farm, and when sufficiently advanced, they be empowered to employ experts for consultation, and when completed to submit same to Council."

Acting under authority of the above resolution, we have caused to be made all the preliminary tests, surveys and borings, showing the formation of the ground, together with plans. They have been submitted to W. J. McAlpin, expert engineer in the construction of earthen reservoirs. Mr. McAlpin, after some time spent in the city, making himself thoroughly posted in all the details of the preliminary work, has prepared plans and specifications for a reservoir, and same were transmitted to your Honorable Body, under date of December 24th last,

We refer you to the accompanying reports of the Superintendent, Registrar and Chief Engineer of Steam Power for the details of the various branches of the department, the work of construction, financial transactions, and the pumping of water during the year.

Respectfully submitted.

LOUIS P. REICHERT, JAMES RYAN, S. K. WORTHINGTON, Water Commissioners.

REPORT

OF THE

Superintendent and Engineer

FOR

1888.

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BUFFALO CITY WATER WORKS.

Superintendent and Engineer's Office.

BUFFALO, January 1, 1889.

To Louis P. Reichert, James Ryan, S. K. Worthington, Water Commissioners:

GENTLEMEN: — Herewith is presented the report showing the operation of the department and the detailed statement of the same for the year 1888.

LOWER PUMPING STATION.

The improvements on the north side have been completed. On the south side an addition was built to the boiler house and four cylinder boilers placed therein. A new chimney and a retaining wall constructed on the easterly side of the property recently purchased. The amounts expended for the above all being within the appropriations.

UPPER PUMPING STATION.

A marine boiler has been constructed and placed in the boiler house. This was found necessary in order to relieve the other two boilers, and to furnish steam sufficient to operate both engines when necessary.

INLET PIER AND TUNNEL.

During the season the shaft at the pier was increased to its full size and the bulkheads in the tunnel removed; the tunnel between Bird Island Pier and the shore-shaft cleaned; an additional gate was placed on the south side of the shore-shaft, the expense of the above improvements being \$24,828.97. There was placed in the tunnel connecting the Inlet Pier with the engine house a telephone and an electric light cable, costing \$1,330.30. Also an ice elevator in the shore-shaft, to remove the ice that accumulates there, at a cost of \$1,263.94.

BIRD ISLAND PIER.

The top of the pier was covered with Portland cement and the ice breaker was protected by finishing the boiler-iron covering.

NEW RESERVOIR.

Plans and specifications were prepared during the season, borings taken showing the formation of the ground and all detail work finished, which has been submitted to the Common Council for their approval.

THE NEW THIRTY-SIX-INCH MAIN.

This main has been completed as far east as Oak Street, a distance of 12,520 feet, at a cost of \$116,885.70, the appropria-

tion for the same being \$150,000. The remaining portion will be completed early in the season.

DISTRIBUTION.

Pipe. — There was laid twenty-one miles and 1250 feet of pipe of various sizes, at a cost of \$240,715.14, making the total amount of pipe in the city 252 miles and 403 feet.

Services. — There were placed in the pipes 3,182 additional taps, making the total number 32,650.

Hydrants. — There were 146 hydrants placed on new lines of pipes, making the total number in use for fire purposes 2,286.

Valves. — The number of new valves placed on new mains were 231.

Meters. — There are eighty-seven meters and twenty-eight hydraulic elevators in use. The amount of water used by meter measurement was 2,017,653,000 gallons. The amount of water used by hydraulic elevators was 78,898,000 gallons. The amount paid for water by meters was \$53,029.60, and for hydraulic elevators \$4,733.88, the total amount being \$57,763.48. The expense of maintaining the meters was \$781.18.

REVENUE.

The total amount received during the year was \$494,-777.52.

OPERATING EXPENSES.

The total expenses were as						
15,606 tons of coal, costing,						\$60,395.22
Other expenses,	٠	•	•		•	73,014.17
Total expenses						\$122,400,20

WATER PUMPED.

The total amount of water pumped was 15,545,365,450 gallons, being an average of 42,590,042 gallons per day, or 170 gallons per head of population. The cost of pumping based on the expenses was less than 1 cent per thousand gallons; including the interest paid on bonds, it was a trifle less than 2 cents per thousand gallons.

RECOMMENDATIONS.

To provide a place for the new engine it will be necessary to take the northerly part of the south coal house and convert it into an engine room, by raising the roof seven feet, underpinning the present walls and making an opening in the south wall of the main engine room, making it, in fact, a part of it. Additional coal and boiler houses will also be required. To convey the water to the new well it will be necessary to construct another conduit, with the necessary gates, etc. The detail plans for doing this work are being prepared, and will be submitted for your consideration when finished.

Engine No. 2 at the lower pumping station requires a new foundation and the refitting of the working parts and new rods.

The openings into the old and new tunnels at Bird Island Pier should be rebuilt with stone. The openings at the Inlet Pier should also be protected, to prevent the ice from entering the shaft, if possible.

A liberal appropriation should be made for fire reservoirs, for the construction of additional ones and the placing in good condition the present ones.

Seventy per cent. of the water pumped is wasted, and to stop this enormous waste I would recommend the general introduction of meters, and after July 1st next that all new supplies be metered (without exception). If every supply was metered our consumption would not exceed 15 millions of gallons per day, and our tunnels, pumps and mains leading into the city would be sufficient for years to come. It is better now to restrict the use of water by meters and maintain a good pressure of water in the pipes than to continue this waste with a constantly reduced pressure, constructing another tunnel, purchasing additional engines and pumping mains that will be found necessary almost immediately.

LOUIS H. KNAPP, Superintendent and Engineer.

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REPORT

OF THE

REGISTRAR

FOR

1888.



REGISTRAR'S OFFICE.

BUFFALO, January 1, 1889.

Louis P. Reichert, James Ryan, S. K. Worthington, Water Commissioners.

GENTLEMEN: — In compliance with the requirements of your Honorable Body, I have the honor to submit my report giving a full and detailed statement of the transactions, and standing of various accounts for year ending December 31, 1888.

The total receipts and disbursements of the department for the year were as follows:

RECEIPTS.

Cash on hand January 1, 1888,	\$ 51,612.89
Cash Receipts for year, Water rates,	
etc.,	494,777.52
Issue of Bonds authorized by Act of	
the Legislature, Chapter 350 of	
the laws of 1880,	57,500.00
Authorized by Act of the Legislature,	
Chapter 182 of the law of 1888, . (\$500,000.	00) 275,000.00
	\$878,800.41
	40 0/0,090.41

DISBURSEMENTS.

Interest on Water Bonds,
\$878,890.41
The cash balance on hand January 1, 1889, \$139,074.01, is made up of items included in estimates of 1888, not all paid for, viz.:
New Gaskill Engine, balance due Holly M'f'g Com-
pany upon completion and acceptance, 19,750.00 Other contractors' work not wholly completed at
close of the year, 6,000.00
Six months' interest on bonded debt, as required
by Charter,
\$ 94.114.62
The amount of 1888 appropriation unexpended, being the balance left on hand January 1, 1889. The cost of the work for the year being
less than estimated expense therefor, 44,958.86
\$139,073.48
REVENUE.
The total receipts for Water, etc., not including issue of bonds as authorized for a specific purpose for the year, was,

\$490,473.36

This is an increase over the previous year of \$18,365.65. The increased receipts for the year are especially gratifying, as water rates to Domestic Consumers were reduced 10 per cent. on house rates, and $33\frac{1}{3}$ per cent. on bath tubs, at the first of the year.

The following itemized statement shows source of revenue, viz.:

Water	for City purposes,										\$100,000.00
From	Domestic Consum	ers	aı	nd	N	Ian	ufa	icti	ure	rs	
ne	ot metered,										318,819.67
4.	Manufacturers and	Ra	ilro	oad	s,	me	ter	ed,			57,763.48
"	Builders,					•					1,932.89
**	Corporation Cocks,	•						•			6,578.00
"	Rent of Dodge Far	m,									415.00
**	Street Sprinkling,										2,162.85
**	Turn-on Fees,										239.55
**	Circus,										15.00
"	Street Paving,										1,441.00
"	New Boxes,										90.00
**	Plumbers' Licenses,	, .									810.00
••	Tapping Fines, .										13.00
"	Flushing Sewers, .			•	•	•		•	•	•	192.92

FROM SALE OF OLD MATERIAL.

1888.	D # 1 G . I
Jan.	19, Buffalo Cast-Iron
	Pipe Co., 15,730 lbs. scrap
	iron, \$125.84
"	19, Buffalo Cast-Iron
	Pipe Co., 1 Valve Box, . 5.∞
44	24, Star Oil Co., 14 empty oil
	barrels, 10.35
Feb.	27, James Ryan, 300 lbs. straw, . 1.80
Mar.	27, Star Oil Co., 18 empty oil
	barrels, 13.50
May	9, H. J. Bushnell, . 340 lbs. old rub-
·	ber, 10.00
Tune	1, W. H. Green, . 1 brass hydrant
	cap, I.00
44	7, W. H. Green, . 1 brass hydrant
	cap, 1.00
4.6	11, Jno. O. Smith, . 1 brass hydrant
	cap, 1.00
• •	•
••	19, Buffalo Cast-Iron
	Pipe Co., 22,460 lbs. cast
	scrap, 162.83
July	9, Buffalo Cast-Iron
	Pipe Co., 27,540 lbs. cast
	scrap, 199.67
"	19, M. Lichtenstein, . 3,270 lbs. lead
	skimmings, . 65.40

scrap, . . . 108.75

31

32	TWENTIETH ANNUAL REPORT	OF	
Dec.	14, Star Oil Co., 5 empty oil bar-	•	
4.6	rels, 17, M. Lichtenstein, 4,075 lbs. lead	\$ 3.75	
	skimmings, .	61.12	
"	17, M. Lichtenstein, 210 lbs. old rope,	.52	
			\$1,331.65
	LABOR AND SUPPLIES.		
1888.			
•	1, Irlbacker & Davis, 2 4-inch valves, .	16.00	
"	5, M. Riter, making 6-inch		
	connection, .	• •	
66	13, James Ryan, sundry labor, .	19.80	
"	17, Hingston & Wood Repairing main		
	corner Genesee		
	and Main St.,.	4.85	
44	17, Hingston & Wood repairing break		
	cor. Oak and		
	Genesee,	2.60	
4.6	17, Hingston & Wood repairing break		
	corner Genesee		
	and Ellicott, .	12.27	
• •	17, Hingston & Wood repairing break		
	corner Genesee		
	and Ellicott, .	4.33	
"	19, Irlbacker & Davis, putting in branch		
	St. Ann's		
	Church	41.08	

Jan.	19,	Howard Iron		
		Works,	. sundry material	
			and labor,	\$ 33.77
46	20,	Buffalo East Side		
		St. R. R. Co., .	fire supply to	
			barn Eagle and	
			Jefferson Sts.,	64.98
• •	24,	Western Transit	•	
		Co.,	resetting hydt.	
			Ganson St., .	10.91
Feb.	II,	Buffalo Spring	•	
		and Gear Co., .	No. 1501 Nia-	
			gara St.,branch	
			for fire supply,	48.19
44	24,	M. H. Birge & Son	making 6-inch	
			connection, .	50.56
"	24,	James A. Roberts	, laying 4 and	
			6-inch pipe in	
			Main St.,	235.16
Mar.	I,	Beals & Brown, .	repairs to Ter-	
			race pipe,	25.81
• •	17,	Providence Steam	<u>l</u>	
		and Gas Co.,	labor and mate-	
			rial at planing	
			mill,	73.62
**	26,	Beck Brewing Co.	, exchange of	
			meters,	153.93
April	4,	Park Commis-		
			. moving hydt.	
			Court St.,	21.76

34	TWENTIETH ANNUAL REPORT	г оғ
May	3, Adams & O'Day, repairs to service	
	pipe,	\$17.10
June	5, L. P. Reichert, . sundry labor and	
	material,	2.75
**	5, L. P. Reichert, . horse keeping, .	
"	8, L. H. Knapp, . labor and mate-	
	rial,	5.00
	9, Hoffeld & Co., . putting in branch	_
46	21, M. Cobb, 37 Church St.,	
	filling cistern, .	3.00
July	3, Forest Lawn	
	Cemetery, labor and mate-	
	rial,	2.18
**	11, Boller & Reckten-	
	walt, running 4-inch	
	fire supply,	40.00
**	11, Brush Electric	
	Light Co., labor and mate-	
	rial, Elk and	
	Babcock Sts., .	40.89
4.6	20, C. Huck, sundries,	5.90
**	21, Churchyard Plan-	
	ing Mill, running 4-inch	
	fire supply, .	68.68
••	23, Thomson-Hous-	
	ton Electric	
	Light Co., running 4-inch	
	supply, Ex-	
	press St.,	63.18
	•	-

rial, 77.52

35

36 TWENTIETH ANNUAL REPORT OF Oct. 29, Baynes Crematory labor, etc., . . \$49.19 4, John Kam, . . changing valves, Dec. 13, Henrichs' Planing Mill, . . . for fire supply, . 38.50 13, Park Commissioners, labor, etc., on 20-inch pipe, . 147.18 14, Jacob Dold, . . labor and material, 6.00 15, Buffalo Cast-Iron Pipe Co., . . . cartage, . . . 2.00 15, Roos Co-operative Brewing Co., . labor packing valve. 3.00 17, C. Weyand, . . labor, etc., . . .90 17, Pratt & Letchworth, . . . making connection, 39 27 17, Buffalo Cast-Iron Pipe Co., . . setting hydrant, 32.95 18, A. Geisel, . . . taking out 4-inch pipe on Broadway, 9.20 20, C. J. Hamlin, . . labor, etc., at Barnes & Hengerer building, 54.86 20, Hingston&Woods repairing break Seneca and

Lester Sts., .

9.26

	THE BUFFALO CITY WATER WORKS.	37
Dec.	22, Irlbacker & Davis, supply to Rich-	
	mond hotel, . \$47.23	
**	26, Sikes Chair	
	Works, fire supply, 60.88	
	28, Jewett Estate, . extending water	
	main Jewett	
	Ave., 783.42	
••	31, Geo. Martin, Delaware Ave.	
	and Dewitt St.,	
	labor, etc., . 13.38	
••	31, Thomson-Hous-	
	ton Electric	
	Light Co., labor, etc., 64.43	
••	31, Geo. Martin, repairs to 4-inch	
	main Broad-	
	way and Smith	
	Sts., 9.36	
		2,972.51

\$494.777.52

The following balance sheet gives the exact standing of the various Accounts at close of the year. And shows fully the expense incurred in each and every branch of the department. All items of purchase, wages, etc., being carefully divided and posted to an account under its proper classification.

BALANCE SHEET BUFFALO CITY WATER WORKS, DECEMBER 31, 1888.

2.	Buffalo City Water Works	
	Construction,	\$584,382.00
3.	Buffalo City Water Works	
	Extension Fund,	1,286,728.01
4.	Bonds Payable,	\$2,778,382.00
5.	City Treasurer,	51,366.26
6.	Hydrant and Water Fund, .	1,378,861.75
7.	Buffalo City Water Works	
	Extension Loan,	2,387,500.00
10.	Redemption Bonds Sinking	
	Fund,	50,000.00
20.	Supply Account,	571,631.44
51.	Store House,	3,597.83
113.	Labor Store House,	749.89
123.	Labor Trench Account,	58.37
125.	Meter Repairs,	781.17
130.	Valve Repairs,	1,014.75
131.	Pipe and Specials,	4,150.23
133.	General Street Repairs,	4,393.26
145.	Hydrant Repairs,	5.937.78

979.34

1,200.00

New Maps,

Louis P. Reichert,

177.

TWENTIETH ANNUAL REPORT OF 40 179. James Ryan, \$1,800.00 180. S. K. Worthington, 1,200.00 Prospect Reservoir, 182. 1,285.13 Harness Repairs, 192. 113.83 Machinist, Lower Engine 194. House, 201.25 Veterinary, 195. 64.00 New Harnesses Purchased, . 196. 40.00 Wagons and Sleighs pur-197. chased, 225.00 Horses purchased, . . . 198. 810.00 Repairs of Store-house Build-199. ing, 40.88 200. Repairs of Tools, Upper Engine House, 3.30 202. Feed, 1,438.12 Repairs Building, Lower En-203. gine House, 1.83 Advertising, 204. 308.61 205. Stable Supplies, 224.92 207. Repairs Low Service Boilers, Lower Engine House, . 656.04 Clerk, Lower Engine House, 209. 900.00 Repairs High Service 210. Boilers, Lower Engine House, 270.02 Repairs Engine No. 1, Up-212. per Engine House, . . . 6.90 213. 1,210.09

41

TWENTIETH ANNUAL REPORT OF 42 Fuel, 245. \$70,111.59 New Tools, Store House, . 25 I 433.13 Corporation Cocks and Ser-256. 1,890.06 Repairs Tools, Store House, 257. 27.78 262. Blacksmith Shop, 1.434.06 266. New Buildings, Lower Engine House, 22,622.15 268. Fire Hydrant Protection, . 5,478.28 269. Street Reservoirs, 406.94 Delivering Bills, 270. 604 00 Inlet Pier, 271. 553.00 278. City Treasurer, 494,777.52 Water Rates, \$418,819.67 279. Meter Rates, 57.763.48 287. Building Rates, 1,932.89 291. 295. Corporation Cocks, 6,578.00 Labor and Supplies, . . . 298. 2,972.51 Sale of Old Material, . . . 1,331.65 300. Rent of Dodge Farm, . . . 303. 415.00 Street Sprinkling, 2,162.85 304. Turn on Fees, 30б. 239.55 Circus Rates, 309. 15.00 Street Paving, 310. 1,441.00 New Boxes, 311. 90.00 Plumbers' License, 810.00 312. Tapping Fines, 13.00 314. Flushing, 315. 192.92 Dodge Farm Reservoir, . . 2,472.15 321.

322.	Moving Hydrants for Street	
	Paving,	\$1,324.17
401.	Freight and Express,	108.11
401.	Rent of Bell Telephone, .	286.74
403.	Bridge Repairs,	107.88
404.	Bird Island Pier,	259.66
404.	Traveling Expenses,	10.30
406.	Repairs Feed Pumps, Lower	
	Engine House,	196.17
411.	Gas Bills,	694.62
413.	New Pumping Engine,	
	Lower Engine House, .	75,000.00
414.	Extension No. Boiler House,	
	Lower Engine House, .	2,722.68
415.	Unpaid Bills, 1887,	112.34
416.	Repairs Feed Pumps, Upper	
	Engine House,	.60
416.	Electric Light Plant,	952.48
417.	Addition So. Boiler House,	
	Lower Engine House, .	5,231.09
419.	Land Purchased,	10,100.00
420.	Electric Light and Tele-	
	phone Cable,	1,330.30
420.	New Cylinder Boilers,	5,000 00
421.	Enlarging Shaft, etc., Inlet	
	Pier and Tunnel,	24,828.97
422.	Retaining Wall and Labor	
	Leveling off and removing	
	Dirt,	7,157.06

44	TWENTIETH ANNUAL	REPORT OF
423.	Thirty-six inch Main, Line	
	No. 1,	\$8,612.25
425.	Thirty-six inch Main, Line	
	No. 2,	1 16,885. <i>7</i> 0
426.	Ice Elevator in Shaft,	
	Lower Engine House, .	1,263.94
427.	Elmwood Avenue North to	
	Summer,	678.79
427.	Montgomery Street, Jones	
	to Clinton,	75.35
427.	Utica Street, Richmond to	
	Howard Avenue,	107.57
427.	Helen Street, Herkimer to	,
	DeWitt,	497.03
428.	Austin Street, Niagara to	.,,
	Bridge,	66.59
428.	Virginia Street, 4th to 5th, .	426.13
428.	Grant Street, Bouck to Dela-	
	van Avenue,	582.65
428.	Utica Street, Elmwood to	, ,
	Ashland Avenue,	27.14
429.	Jones Street, Klaus to Nor-	
	ton,	87.02
522.	Frontage Tax, Rebated,	96.40
607.	Cooper Street, Main to Belt	, ,
•	Line,	1,536.05
607.		2,353.37
607.	Delavan Avenue, Delaware	
•	Avenue to Main,	5.535.71

612. Nineteenth Street, Massa-

chusetts to Hampshire, .

519.69

46	TWENTIETH ANNUAL	REPORT OF
612.	Florida Street, Main Street 600 feet east,	\$ 386.10
613.	Fillmore Avenue, "A" Street	\$ 500 0
3	to "C" Street,	483.90
613.	East Utica Street, Hoff to	-
	Humboldt Parkway,	1,758.27
613.	Jewett Avenue, Main to Cres-	
	cent Avenue,	310.13
614.	DeWitt Street, Delavan to	
	Clinton Avenue,	639.35
614.	Bowen Street, Broadway to	
	Sycamore,	1,480.73
614.	Loepere Street, Broadway to	
	Sycamore,	1,472.17
615.	Sweet Avenue, Broadway to	
	Kent,	292.12
615.	Vine Street, Elm to Oak, .	205.76
615.	Klaus Street, Metcalfe to	
	Jones,	238.90
616.	Clemo Street, Clinton to	
	Norton,	382.36
616.	Winslow Street, Broadway to	
	300 feet south,	266.95
616.	Goodyear Street, Broadway	
	to 350 feet north,	254.22
617.	Perry Street, Smith to 300	
	feet west,	982.31
61 <i>7</i> .	Humboldt Parkway, Utica	
	to Ferry,	1,118.31

1,157.10

TWENTIETH ANNUAL REPORT OF 48 Gibson Street, Curtiss to 622. Lovejoy, \$1,272.04 Humboldt Parkway, North-623. ampton to Kingsley, . . 209.53 Delavan Avenue, Chapin 623. Parkway to 90 feet west, 134.39 Eaton Street, Masten to 623. Michigan, 154.81 Perry Street, Smith to Selkirk, 624. 732.15 Smith Street, Abbott Road 624. to St. Stephen's Place, . 452.99 624. Bowen Street, Walden Avenue to Sycamore, . . . 942.76 Gerhard Street, Dodge to 625. Northampton, 458.44 625. Hayward Street, end of pipe to Perry, 218.72 625. Tennessee Street, Mackinaw to Sandusky, 688.67 Vandalia Street, Mackinaw to Sandusky, 424.52 626. Otto Street, Hayward to Alabama, 261.86 Elmwood Avenue, Summer to Bryant, 1,203.15 Abbott Road, Smith to Erie 627. Railway, 2.394.37 627. Carroll Street, Heacock to Red Jacket, 297.27

49

50	TWENTIETH ANNUAL	REPORT OF
632.	Riley Street, Main to Michi-	
	gan,	\$ 497.30
633.	Chester Street, Puffer to end	
	of pipe,	435.81
633.	Penfield Street, Niagara to	
	West Avenue,	140.57
633.	Balcom Street, Linwood to	
	Michigan,	415.13
634.	Herkimer Street, Annie	
	Place to Bird Avenue,	313.69
634.	Breckenridge Street, Herki-	
	mer to Hoyt,	1,360.31
634.	Jewett Avenue, end of pipe	
	to Davis,	783.42
635.	Woehler Avenue, Dodge to	
	Northampton,	470.16
635.	William Street, North Ogden	
	to City Line,	319.81
635.	Ferry Street, Jefferson to end	
	of pipe,	1,115.46
•	Kail Street, Amherst to Austin,	1,444.59
636.		
	to Highland,	282.53
636.	•	
	to 150 feet west,	92.92
637.	Crescent Avenue, south of	_
_	Jewett Avenue,	685.35
637.	Lovejoy Street, Clark to	
	Sears,	234.14

	THE BUFFALO CITY WAS	TER WORKS.	51
638.	"B" Street, Fillmore Avenue to Mills,	\$ 532.98	
638.	Fourth Street, Jersey to Penn-		
	sylvania,	377.18	
638.	Bristol Street, Bond to Lord,	308.24	
639.	Metcalfe Street, Thomas to		
	Norton,	308.07	
639.	Norton Street, Metcalfe to		
	Jones,	229.68	
639.	Michigan Street, Balcom to		
	Bouck,	377.85	
640.	North Central Avenue, Broad-		
	way to end of pipe,	479.89	
640.	Purdy Street, Harlow Place		
	to end of street,	602.13	
640.	Delavan Avenue, Grant to		
	Tryon Place,	531.26	

\$5,333,149.25 \$5,333,149.25

BALANCE SHEET OF THE BUFFALO CITY WATER WORKS, JANUARY 1, 1889.

All the accounts in foregoing balance sheet being closed to the following one, under their proper heading.

2.	Buffalo City Water Works	
	Construction, \$584,382.∞	
3.	Buffalo City Water Works	
	Extension Fund, 1,382,733.69	
4.	Bonds Payable,	\$3,110,882.00
5.	City Treasurer, 139,073.48	
6.	Hydrant and Water Fund, .	1,665,307.17
7.	Buffalo City Water Works	
	Extension Loan, 2,720,000.00	
10.	Redemption Bonds Sinking	
	Fund,	50,000.00

\$4,826,189.17 \$4,826,189.17

COST OF WATER WORKS FROM PURCHASE TO DATE.

Original Purchase,		 	. 110,826.14 . 4,423,050.35 . 3,322,038.20 . 1,686,104.70
Total			. \$10,386,092.87
RECEIPTS	5 .		
Water Rates,			\$5,331,598.35
Bonds,			
Taxes,			
Total,	·		. \$10,386,092.87

PRESENT STANDING OF WATER WORKS ACCOUNT.

	Jan. 1, 1888.	Added during the Year.	Jan. 1, 1889.
Original purchase,	\$705,000,00		\$705,000.00
Real Estate, including Taxes,	100,726.14	\$10,100.00	110,826.14
Engines,	240,998.58	!	240,998.58
Holly Pumping House,	12,002.25	1	12,092.25
Holly Pumping Machinery.	41,307.41		41,307.41
New Engine House,			86,478.34
Gas Well,	9,406.44		9,406.44
Inlet Pier and Tunnel,	530,346.56		
Main Pipes, Branches, Hydrants, etc., .	2,927,572.58	4 1 4 1 1 1	
Coal and Boiler House and Chimney, .		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	26,711.53
Gaskill Engine, No. 4	94,892.44		94,892.44
Coal Tunnel connecting Upper and	94,092.44		
Lower House,	3,351.19		3,351.19
New Valve House,	910.70		910.70
Overhead Crossing,	1,447.87		1,447.87
New Boiler House,	8,497.19		8,497.19
Electric Light Plant,		952.48	3.687.24
Repairs Boilers, and moving same,	5,417.65		5,417.65
New Cylinder Boilers,	5,417.05	5,000.00	5,000.00
New Buildings.		37,733.88	37,733.88
Ice Elevator,		1,263.94	1,263.94
New Reservoir,		2,472.15	2,472.15
Gaskill Engine No. 5,		75,000.00	75,000.00
Electric Light and Telephone Cables to		/5,000.00	75,000.00
Inlet Pier.		1,330,30	1,330.30
Total,	\$4 ,797,891.63	 	\$5,226,397.1

WATER BONDS.

Bonds outstanding January 1, 1889, issued for the purchase, extension and improvement of the Water Works.

	Date of	Is	suc			Rate of Interes	st. '	Wh	en Due.	Amount.
Oct.	1, 1870				-	7		Oct.	1, 1889	\$145,000.0
lan.	1, 1871					7		Jan.	1, 18go	50,000.0
lan.	1, 1871					7		Jan.	1, 1891	100,000.0
Aug.	1, 1871					7		Aug.	1, 1891	50,000.0
Oct.	1, 1871					7		Oct.	1, 1891	100,000.0
July	1, 1872					7		July	1, 1890	100,000.0
Oct.	1, 1872					7		Oct.	1, 1892	100,000.0
Dec.	1, 1872					' 7		Dec.	1, 1892	0.000,00
Sept.	1, 1873					1 7		Sept.	1, 1903	200,000.0
April	1, 1874					7	,	April	1, 1905	100,000.0
July	1, 1874					7		July	1, 1906	100,000.0
Aug.	1, 1874					7		Aug.	1, 1908	100,000.0
ct.	1, 1874					7		Oct.	1, 1908	79,382.0
lug.	1, 1875					7		Aug.	1, 1000	100,000.0
an.	1, 1876					. 7	1	Jan.	1, 1896	50,000.0
luly	1, 1876					6		July	1, 1896	100,000.0
Sept.	2, 1878					' 5		Sept.	2, 1898	50,000.0
April	25, 1879					5		April	25, 1898	100,000.0
\pril	26, 1880					5		April	26, 1899	100,000.0
ulv	1, 1880					! 4		July	1, 1904	50,000.0
Sept.	1, 1880					4		Sept.	1, 1004	0.000,000
۱ov.	26, 1880					. 4		Nov.	26, 1807	64,000.0
\pril	25, 1881							April	25, 1900	100,000.0
\pril	1, 1884					4		April	1, 1901	90,000.0
uly	1, 1885					31/2		July	1, 1905	100,000.0
Oct.	1, 1886					31/2		Oct.	1, 1903	100,000.0
March	1, 1887					31/2	1	Marcl	h 1, 1906	100,000.0
April	1, 1887					31/2	1	April	1, 1906	50,000.C
une	1, 1888					31/2	i	June	1, 1902	100,000.0
une	15, 1888					31/2	'	June	15, 1908	57,500.0
lune	15, 1888					31/2	1	June	15, 1914	275,000.0
Dec.	1, 1888					3 1/2	i	Dec.	1, 1908	100,000.0
т	otal outs	 tar	ndir	nσ		1				\$3,110,882.0

INTEREST PAID ON WATER BONDS DURING 1888.

January 23d, .								\$8,750.00
February 20th,								12,000.00
March 19th, .								29,778.37
April 23d,								1,280.00
May 21st,								10,500.00
June 20th,								19,750.00
July 23d,								20.750.00
September 17th,								29.778.37
October 22d, .								1,280.00
November 19th,								14,568.75
December 24th,								19,750.00
							_	

\$168,185.49

COMPARATIVE STATEMENT.

Revenue received, coal consumed and water pumped annually for seventeen years.

)		,		7	Pipe.	Each	Each Year
Усаг.	Revenue.	Expenses.	Consumed, Tons.	Water Pumped, Gallons.	Daily, Gallons.	Extensions.	Miles.	Feet.	Miles.	Feet.
1871	\$124,865.00	\$77,456.95	3,645	2,775,752,190	7,604,801	284,297.84	67	4.644		• 1
1872	138.150.00	69,228.74	1,546	3,226,891,140	8,840,797	355,492.46	77	2,921	ç	3,55
1873	168,267.20	77,747.60	4.720	3,329,193,162	9,316,598	308,600 46	SI	4,912	4.	1,90
1874	176,219.10	66,218.50	2,852.50	3,040,012,107	8,509,481	307,355.64	86	÷00;	4	5,2
1875	184,516.48	64,862.37	3,422.67	3,828,594,027	10,489,298	159,098.75	2	1,591	+	1,9
1876	191,335.84	61,474.22	3.357.88	1,020,936,278	11,016,263	106,900 21	92	4,931	-	ယ်
1877	189,296.90	57,553.27	3,249	4,267,218,162	11,691,181	17.014.05	93	2,631	•	2,980
1878	200,183 28	55,230.50	3,524.50	4,589,879,986	12,503,078	48,555.32	ž	3.376	1	2
1879	205,415.75	54,497.22	3,979.75	5,291,337,520	14,496,815	11.457.50	97	626	N	2.530
1880	216,214.37	60,983.67	5,809	5,993,009,343	16, 369.802	161.883.89	102	873	Сч	2
1881	210,031.46	76,629.09	7.192 80	6,344,182,224	17,394.973	201.457.10	11	4,149	12	္ ၁, 2,
1882	362,762.07	79,105.90		7,076.212,870	19,386,885	160,617.81	131	524	16	1,655
1883	426,353.57	87,193 53	3,811	8,568,435.200	23,475,192	200,029.90	150	529	8	5,13
1884	381.581.64	81,078.88	9,128	8,789,971.200	24,082,112	186,623.92	161	2,931	Į	2,402
1885	444,440.77		10,503	10,441,393,340	28,606,557	327,918.82	191	8 30	27	1,474
1886	477,209.57		11,280	12,069,882,676	33,068.172	342,493.57	213	1,218	22	3
1887	476,411.87		11.374	14,033,297,522	38,484 936	209,542.10	232	2,245	13	2.780
1888	494,777.52	_	12,318	15,545,365,450	12,590,042	428,505 68	252	403	21*	1,250

This includes one mile, 3092 feet of large mains laid to replace small ones. There was used of natural gas as fuel the equivalent of 3,288 tons coal.

SCHEDULE OF BILLS AND ACCOUNTS.

APPROVED DURING THE YEAR 1888 BY THE WATER BOARD AND PAID BY THE CITY TREASURER.

IMPROVEMENTS AND EXTENSIONS.

Date.		Name.	Description.	Amount.
Jan.	9,	The Holly Man'f'g Co.	,	
		Lockport, N. Y., .	Payment on new	
			Gaskill pumping	
			engine, \$	00.000,81
"		James Boland,	Paym't on construc-	
			tion new boiler	
			house,	3,000.00
Jan.	16,	B. Cunningham,	Excavating rock for	
			receiv'g chamber,	1,750.00
Jan.	23,	Niagara Bridge Works,	Payment on iron	
			roof contract, .	1,500.00
Jan.	30,	Bingham & Taylor, .	Service supplies, .	10.35
**		Fox & Holloway,	Sand,	18.75
		Buffalo Sewer Pipe Co.	Tile pipe and bends,	3.33
		The Buffalo Brick Man	•	
		ufacturing Ass'n, .	Brick,	.44.80
**		Goodyear Rubber Co.	Boots and slippers,	5.00
44		C. Sturm,		9.50
4.		Becker & Wickser, .	Harness repairs,	6.00
44		D. J. Stickney,	•	4.00
		-		•

60	TWENTIETH ANNUAL REPORT OF
Mar. 5.	well and gate, . \$298.00 The U. S. Electric
	Light and Power Co. one 200 light arma-
	ture, etc., 390.80
Mar. 12,	Lesswing & Stines, . Wagon repairs, 73.55
••	Lesswing & Stines, . Wagon repairs, 137.95
• •	Urban & Co., Feed, 6.45
••	H. J. Fox, Coach hire, 3.50
**	Jno. C. Post, Turp'ne and glass, . 8.65
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe, 13.16
••	P. Brennan, Expenses to Lock-
	port, N. Y., 3.80
••	Williamsville Lime Co. Quick lime, 3.20
••	Jno. Forbes, 3 Horses, 620.00
Mar. 26,	Irlbacker & Davis, . Leather valves, etc. 24.69
••	F. B. Gallagher, Cash'r, Pay roll, March, . 2,188.11
April 9.	Holly M'f'g Co., Pay't on new Gas-
	kill pump'g engine, 15,000.00
••	E. H. Butler, Advertising, 16.25
••	J. N. Matthews, Advertising, 11.25
April 16,	The Courier Co., Advertising 3.13
••	C. J. Heinold, Hay, 212.82
••	J. N. Matthews, Advertising, 8.25
••	Miller Bro's, Spring wagon, 225.00
**	Jos. Churchyard & Son, Pay't on contract
	extended roof new
	boiler house 50.00

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	THE BUFFALO CITY WATER WORKS.	61
April 30,	Matthews, Northrup	
	& Co., 50 slips,	\$2.50
"	Goodyear Rubber Co., Merchandise and	
	Express charges,	8.25
**	Otto Ulbrich, Tracing cloth,	9.00
46	Felthousen & Whitted, Monkey wrench, .	.65
4.	C. J. Heinold, Oats,	104.61
44	C. J. Heinold, Bay mare,	190.00
"	Beals & Brown, Steel, iron and nails,	44.67
**	Farrar & Trefts, Forging and drill'g,	5.80
**	F. B. Gallagher, Cash'r, Pay roll, April,	2,281 11
4.	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g Apr. 28,	1,417.69
••	Weed & Co., Hardware,	11.64
**	Reinecke & Zesch, . Advertising,	9.00
••	Bingham & Taylor, . Valve boxes,	218.24
••	Eddy Valve Co., ()ne 36-inch valve, .	550.00
••	The Times Co., limited, Advertising,	14.00
4.	Scatcherd & Son, Lumber,	40.88
**	Jno. Mesmer, Coach hire,	4.00
••	Collignon & Grimard, Corporation cocks,	134.75
••	F. B. Gallagher, Cash'r, Wages, laborers'	
	week end'gMay 5,	1,820.48
**	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g May 12,	1,583.24
• •	F. B. Gallagher, Cash'r, Lead,	4,503.01
**	Holly Manufact'g Co.,	•
	Lockport, N. Y., Paym't on new Gas-	
	kill pumping en-	
	gine	7.000.00

62 TWENTIETH ANNUAL REPORT OF May 21, Jas. D. Warren's Sons, Advertising, . . . \$18.00 Ino. C. Post, . . . Paint and oil, . . 2.86 Buffalo Gas Light Co., Coke, 9.00 Laycock Lumber Co., Lumber, 83.72 S. D. Colie, . . . Lumber, . . . 42.41 Ralph G. Drullard, . Cartage, 14.81 • 6 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, 4,283.20 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, 2,799.96 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings. 4,336.58 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, 5,688.26 F. B. Gallagher, Cash'r, Wages, laborers' w'k end'g May 19, 1,678.11 James Boland, . . . Paym't on construction new boiler house, 2,000.00 June 4, F. B. Gallagher, Cash'r, Wages, laborers' w'k end'g June 2, 1,634.50 F. B. Gallagher, Cash'r, Pay roll, May, . . . 2,112.73 E. H. Butler, . . . Advertising, . . . 9.75 E. H. Butler, . . . Advertising, . . . 11.38 Pratt & Co., Hardware, . . . 18.95 J. N. Matthews, . . Advertising, . . . 20.25 (). F. Barton, . . . Labor at pump house, 10.00

Schlund & Doll, . . Furniture,

31.40

	THE BUFFALO CITY WATER WORKS.	63
June 4	, A. L. Barber, Repairing (asphalt),	\$185.67
• 6	C. J. Hamilton, Lumber,	7.31
June 11	, Buffalo Sewer Pipe Co. Tile pipe and bends,	62.90
••	Jno. Lyth & Sons, . Tile pipe and el-	
	bows,	39.24
**	Mumm & Co Advertising,	12.75
••	Jas. D. Warren's Sons, Advertising,	30.00
44	S. D. Colie, Lumber,	51.72
••	Jno. Mesmer, Coach hire,	8.00
44	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	715.76
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	7,598.22
66	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	525.41
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	5,764.04
••	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	801.80
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	3,104.36
• •	Detroit Free Press Co. Advertising,	9.60
• •	The Courier Co., Advertising,	4.47
••	Ludlow Valve M'f'g Co. Valves,	4,681.52
4.6	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g June 9,	1,835.87
**	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g June 16,	1,766.87
June 25,	Collignon & Grimard, Corporation Cocks,	237.80

June 25	, Hardwicke & Ware, . Plumbers' ladle, .	\$0.35
**	Buff. Gas Light Co., . Coke,	21.00
**	Laycock Lumber Co., Lumber,	39.94
• •	G. E. Newman, Tumblers and jug, .	1.45
••	Weed & Co., Hardware,	12.82
	The Brick M'f'g Co., . Brick,	7.00
••	Cornell Lead Co., Lead pipe,	89.19
• •	O. W. Clark & Son, . Seed,	7.95
••	Scatcherd & Son, Lumber,	11.38
	Walbridge & Co., Hardware,	20 50
••	F. B. Gallagher, Cash'r, Pay roll June,	2,046.02
••	Williamsville Lime Co. Cement,	6.00
••	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g June 23,	2,174.34
July 2	, F.B. Gallagher, Cash'r, Wages, laborers'	
•	week end'g July 2,	1,886.19
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	•
	special castings, .	442.73
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	,
		3,127.25
••	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	115.20
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	, special castings, .	562.88
••	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	4,939.88
••	James Boland, Pay't on contract	.,,,,,
	constructing No.	
	boiler house,	1,500.00

	THE BUFFALO CITY WATER WORKS.	65
July	2, Scatcherd & Son Lumber,	\$ 3.63
• •	J. N. Matthews, Advertising,	21.25
••	Buff. Storage and Cart-	
	ing Co., Carting lead,	26.25
44	Bingham & Taylor, . Valve boxes,	299.83
"	James Boland, Labor at No. boiler	
	house,	234.83
• •	Farrar & Trefts, Forging and drilli'g,	49.84
• •	Howard Iron Works, . Fire hydrants, etc.	3,864.55
••	Irlbacker & Davis, Pipe, plugs, etc	56.85
July	9, Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	336.94
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	5,990.77
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	638.77
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	5,132.46
44	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	4,324.36
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	63 .0 9
"	F. B. Gallagher, Cash'r, Wages of laborers,	
	week end'g July 7,	1,586.41
• •	Plumb, Burdict & Bar-	
	nard, Machine bolts and	
	nuts,	7.90
••	E. H. Butler, Advertising,	9.75
**	F H Rutler Advertising	0.75

July	9, E. H. Butler, Advertising,	\$9.75
July 1	6, Jno. Martin, Coach hire,	4.00
"	Jno. C. Post, Paint,	2.70
44	Scatcherd & Son, Lumber,	2.72
"	Felthousen & Russell, Iron cups and wicks,	7.00
	Weed & Co., Hardware,	1.68
"	Urban & Co., Feed,	4.95
"	C. J. Hamilton, Lumber,	4.13
**	Fox & Holloway, Sand,	41.18
••	Brady & Maltby, Foundation stone	
	for horse trough,	36.00
**	French & Kirkholder, Pails,	11.50
"	The Courier Co., Advertising,	7.28
44	S. D. Colie, Lumber,	45.60
"	Buff. Brick M'f'g Ass'n, Brick,	10.50
44	The Times Printing	
	Co. Limited, Advertising,	24.75
* 6	E. and B. Holmes, . Lumber,	105.25
••	Collignon & Grimard, Corporation cocks,.	260.10
**	Bingham & Taylor, . Valve boxes,	231.30
••	Ludlow Valve M'f'g	
	Co., Valves,	1,790.33
••	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g July 14,	2,075.15
••	Hardwicke & Ware, . Corporation Cocks,	252.44
• •	Howard Iron Works, . Fire Hydrants,	3,453.00
••	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g May 26,	2,406.43
••	M. McComb, Land purchased, .	6,500.00

	THE BUFFALO CITY	WATER	Works.	67
July 16,	Agnes Warren,	Land pur	chased, .	\$3,600.00
44	Buff. Gas Light Co., .	Coke, .		21.00
66	Western Union Tel. Co.	.Telegram:	s and mes-	
		senger s	service, .	5.73
July 23,	John T. Rees, Regist'r,	Wages,	laborers'	
	,	w'k end	'g July 21,	1,943.58
**	John T. Rees, Regist'r,	Lead, .		7,802.73
44	A. Francis,	Lowering	and rais'g	
		iron tru	sses,	200.00
"	Holly M'f'g Co., Lock-			
	port, N. Y.,	Pay't on	new Gas-	
		kill eng	ine,	20,000.00
July 30,	A. Francis,	Lowering	and rais'g	
		iron tru	sses,	250.00
44	Peter G. Straub,	Excavatir	ng rock,	
		Cooper	St.,	500.00
46	John Druar,	Ext. boil	ler house	
		and ere	ct'g chim-	
		ney, etc	.,	1,500.00
46	Electric Light Cable			
	and Telegraph Co., .	Cable, .		450.75
"	James Boland,	Construct	ing new	
		boiler h	ouse,	1,000.00
44	John Hickler,	Enlarging	shaft, etc.,	
		inlet pie	er,	10,000.00
66	Buff. Natural Gas and			
	Fuel Co.,	Use of n	atu r al gas	
		for July		2.174.06

July 3	go, John T. Rees, Regist'r, Wages for laborers during adj. of	
	5 ,	M O
c .	Council,	
•	4, Walbridge & Co., Hardware,	4.50
44	J. D. Warren's Sons, Printing,	40.00
••	Buff. Storage and Cart-	
	ing Co., Carting valves,	24.00
"	Collignon & Grimard, Corporation cocks,.	135.00
"	S. D. Colie, Lumber,	77.63
	Brady & Maltby, Coping and clamps,	145.50
"	C. J. Hamilton, Lumber,	12.30
4.6	Ludlow Valve M'f'g Co. Valves,	3,647.00
"	Howard Iron Works, . Fire hydrants,	624.00
**	Otto Ulbrich, Tracing cloth,	10.50
**	O. S. Laycock Lumber,	96.77
4.6	Peter G. Straub, Stone for engine r'm	256.26
"	D. J. Stickney, Coal,	8.00
"	Farrar & Trefts, Repair's machinery,	117.16
"	James Boland,	684.98
	Buff. Storage and Cart-	. ,
	ing Co., Carting valves,	28.00
"	J. Scatcherd & Son, . Lumber,	1.08
	Buff. Storage & Cart-	
	ing Co., Carting lead,	45.∞
	J. Scatcherd & Son, . Lumber,	6.24
	Bingham & Taylor, Valve boxes,	272.75
• •	L. Hettrich, Jr., Repaying,	288.00
	F. B. Gallagher, Cash'r, Wages, laborers'	200.00
	week ending, .	552.68
	week ending, .	552.08

	·	
69	THE BUFFALO CITY WATER WORKS.	
\$2,254.37	4, F. B. Gallagher, Cash'r, Pay roll, August, .	Sept.
	P. G. Straub, Excavating rock	• 6
285.55	Cooper St.,	
	J. Hickler, Enlarging shaft, etc.	"
11,850.00	inlet pier,	
	James Boland, Constructing new	46
600.00	boiler house,	
	C. H. Kellogg, Iron work for roof	44
541.00	to boiler house, .	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	44
3,042.83	spec. castings, .	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	"
548.31	spec. castings, .	
	Buff.Cast-Iron Pipe Co. Cast-Iron pipe and	"
448.37	spec. castings,	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	**
2,168.02	spec. castings, .	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	"
602.51	spec. castings,	
0 0	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	"
408.58	spec. castings,	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	44
475.16	spec. castings, .	
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	**
102.32	spec. castings,	
66	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	"
662.52	spec. castings, .	
140.60	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	••
140.00	spec, castings	

TWENTIETH ANNUAL REPORT OF 70 Sept. 4, Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, \$411.12 " Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, 410.56 Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, 2,951.85 " Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, 416.30 " Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, 4,873.32 " Buff.Cast-Iron Pipe Co. Cast-iron pipe and spec. castings, 5,313.10 " F. B. Gallagher, Cash'r, Wages, laborers' week ending, . . 1,181.16 " M. Riter, payment on new cylinder boilers, . 1,500.00 " Jos. Churchyard Sons', constructing roof to boiler house, . . 1,348.78 " F. B. Gallagher, Cash'r, Wages, laborers' week ending, . . 1,590.94 " Bott & Hughes, . . Painting at pump house, 300.00 " James Boland, . . . Cont'g retain'g wall 3,000.00 F. B. Gallagher, Cash'r, Wages, laborers, " week ending, . . 1,794.20

F. B. Gallagher, Cash'r, Pay roll, September, 2,206.54

lock,

1.15

9.75

Valentine & Son, . . Keys and repairing

W. H. Arthur, . . . Paint,

"

"

	THE BUFFALO CITY WATER WORKS.	71	
Sept. 4	ı, Buffalo Gas Light Co., Coke,	\$3.00	
**	Weed & Co., Hardware,	6.83	
**	Laycock Lumber Co., Lumber,	8.64	
Sept. 24	4, LudlowValve M'f'g Co. Valves,	1,785.50	
"	Collignon & Grimard, Corporation Cocks,	186.10	
••	J. Hickler, Enlarging shaft, etc.,	•	
	inlet pier,	311.50	
44	S. D. Colie, Lumber,	167.55	
4.6	Bingham & Taylor, . Valve boxes,	365.85	
44	Jacob Ginther, Drinking fountains,	205.31	
"	Volker-Felthousen		
	M'f'g Co., Flange and bolts, .	128.80	
"	Star Oil Co., Oil,	2.84	
"	S. L. Watson, dec'd, Use of sail	76.42	
"	Cornell Lead Co., Lead pipe,	36.66	
"	S. Shepard & Co., Merchandise,	22.80	
4.6	Howard Iron Works, . Bolts, etc.,	27.20	
44	C. J. Hamilton, Window frames,	11.00	
"	D. J. Stickney, Coal,	4.00	
"	R. Brennan, Labor, add. to No.		
	engine rdom,	7.90	
46	Williamsville Lime Co. Cement and lime, .	92.20	
44	L. Hettrich, Jr., Repaving,	123.20	
"	R. Brennan, Labor, add. to No.		
	engine room,	53.66	
44	J. H. Ruckle & Co., . Wrenches, pipe, etc.	113.33	
46	J. Druar, Pay't on ext. to No.		
	boiler house,	3,000.00	
44	Collignon & Grimard, Corporation cocks, .	270.00	

TWENTIETH ANNUAL REPORT OF 72 Sept. 24, Scheeler & Sons, . . Sieve, \$0.60 Tug, Samuel M. Sloan, Tug hire, 120.00 R. Brennan, . . . Forge and Lathe " work, 44.63 " J. Scatcherd & Son, . Lumber, 4.32 " James Boland, . . . Pay't on add. to No. engine room, . . 977.80 " James Boland, . . . Work on sewers, . 77.00 " A. L. Barber, . . . Repaving (asphalt), 745.84 " L. Hettrich, . . . Repaving, 252.76 " F. B. Gallagher, Cash'r, Wages, laborers' week ending, . . 2,125.60 " L. Hettrich, . . . Repaving, 1,356.50 " F. B. Gallagher, Cash'r, Wages, laborers' week ending, . . 1,613.99 " H. Williams & Co., Roofing, 24.80 J. C. Post, Paint, 4.24 Buffalo Gas Light Co., Coke, 15.00 S. D. Colie, . . . Lumber, 53.34 Oct. 8, D. J. Stickney, . . . Coal, 26.30 Hardwicke & Ware, . Pipe and fittings, . 341.77 F. B. Gallagher, Cash'r, Wages, laborers' week ending, . . 2,736.52 Oct. 15, Buff.Cast-Iron Pipe Co. Cast-iron pipe and castings, 281.44 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 908.72

Buff.Cast-Iron Pipe Co. Cast-iron pipe and

special castings, .

6,460.45

	THE BUFFALO CITY WATER WORKS.	73
Oct. 15,	Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, .	\$24 8.93
••	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	\$24 0.95
	special castings, .	4,222.60
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	4,222.00
	special castings, .	3,618.81
	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	3,016.61
	special castings, .	272.68
٠.	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	2/2.00
	special castings, .	4,494.50
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	4,494.30
	special castings, .	287.96
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	207.90
	special castings, .	3,391.82
**	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	3,391.02
	special castings, .	44.87
• •	F. B. Gallagher, Cash'r, Wages, laborers'	44.07
	week ending,	1,885.14
4.	Pottsville Iron and	1,003.14
	Steel Co., Iron beams,	580.54
Oct. 22.	F. B. Gallagher, Cash'r, Wages, laborers'	700.74
000. 22,	w'kend'gApril 20,	1,930.10
"	F. B. Gallagher, Cash'r, Pay roll, October, .	2,247.24
4.	F. B. Gallagher, Cash'r, Wages, laborers'	-,,
	w'k end'g Oct. 29,	2,535.11
	M. Riter, Pay't on new boilers,	
"		1,323.44
Nov. 12,	Wm. Rappich, Excavating rock, .	244.00

Nov. 12, F. B. Gallagher, Cash'r, Wages, laborers	,
w'k end'g Nov. 3,	
" American Well Works, Augers,	
" F. B. Gallagher, Cash'r, Wages, laborers	
w'k end'g Nov. 10.	
" Bott & Hughes, Painting,	
Nov. 19, J. H. Ruckle & Co., . Flange unions, .	
" Buff. Paper Box Co., . Glass top boxes,	•
" Weed & Co., Axeh'dles and hoes	
" Matthews, Northrup	,
& Co., Printing,	64.50
" D. J. Stickney, Coal,	10.00
" Cornell Lead Co., Lead,	13.70
" Goodyear Rubber Co., Gaskets,	• •
" J. Scatcherd & Son, . Lumber,	, ,
" Buff. Sewer Pipe Co., Tile pipe,	• •
" F. B. Gallagher, Cash'r, Wages, laborers	
w'k end'g Nov. 17.	
" Collignon & Grimard, Corporation cocks	÷
and plugs,	
" *The Pottsville Iron	-
and Steel Co., Iron beams,	580.54
" Buffalo Sewer Pipe Co., Tile pipe,	
" Buffalo Gas Light Co., Coke,	21.00
" S. D. Colie, Lumber,	334 93
" Farrar & Trefts, Rep. to Machinery	84.34
Nov. 26, Felthousen & Russell, Head lights and	l
lantern globes,	. 16.20

^{*}Duplicate warrant cancelled March 4, 1888.

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76 TWENTIETH ANNUAL REPORT OF Dec. 3, Buffalo Storage & Carting Co., Carting Iron beams, \$3.82 J. Scatcherd & Son, . Lumber, 3.52 Jacob Hoffman, . . Labor at Dodge Farm, 10.90 James Boland, . . . Building piers, . . 11.25 • 6 James Boland, . . . Valve house, . . . 993.50 James Boland, . . . Pointing engine room, wall, . . . 17.50 Bingham & Taylor, . Valve boxes, . . . 64.44 Dec. 10, Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 3,859.67 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 85.15 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 156.01 " Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 3,581.29 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 3,284.91 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 105.13 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 4,468.14 Buff.Cast-Iron Pipe Co. Cast-iron pipe and special castings, . 157.61

Buff.Cast-Iron Pipe Co. Cast-iron pipe and

special castings, .

2,523.31

	THE BUFFALO CITY WATER WORKS.	77
Dec. 10	, Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	\$47.76
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	3,715.40
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	86.79
44	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	3,292.58
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	68.76
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	3,685.05
"	Buff.Cast-Iron Pipe Co. Cast-iron pipe and	
	special castings, .	118.91
••	P. G. Straub, Excavating rock, .	250.00
"	M. Riter, Pay't on boiler cont.	2,000.00
Dec. 17	, National Meter Co., . Water meters,	3,203.00
**	James Boland, Mason work vault	•
	boxes,	141.00
"	Buffalo Gas Light Co., Coke,	12.00
46	Buff.Cast-Iron Pipe Co. Special castings, .	48.18
"	Cornell Lead Co., Lead,	56.11
"	Buff. Sewer Pipe Co., Tile pipe,	19.46
"	Cornell Lead Co., Lead,	90.98
"	Walbridge & Co., Steel nails,	21.05
44	Fox & Holloway, Sand,	11.25
"	A. L. Barber, Repaving (Asphalt)	11.33
"	A. I Barber, Repaving (Asphalt)	14.83

TWENTIETH ANNUAL REPORT OF Dec. 17, James Boland, . . . Mason work on sewers on line of 36" pipe, . . . " Standard Underground Cable Co., . . . Electric light cable, " C. J. Hamilton, . . . Lumber, " Buff.Cast-Iron Pipe Co. Special castings, . " Howard Iron Works, Fire hydrants, etc.,

Buff.Cast-Iron Pipe Co. Cast-iron pipe, . . 1,922.45
L. Hettrich, Jr., . . Cart'g surpl's earth, 976.80
L. Hettrich, Jr., . . Repaving, . . . 641.02

" F. B. Gallagher, Cash'r, Wages, laborers', w'k end'g Dec. 15,

w'k end'g Dec. 15, 279.38 "F. B. Gallagher, Cash'r, Pay roll, December, 2,329.74

" M. E. Beebe & Son, Drawing plans, . . 25.00

" Hand & Johnson, . . Tug hire, 57.00 ec. 24. Peter G. Straub, . . Excavating rock, . 371.60

Dec. 24. Peter G. Straub, . . Excavating rock, . 371.

"F. B. Gallagher, Cash'r, Wages, laborers'

w'k end'g Dec. 22, 820.00

"Buffalo Gas Light Co., Rep. to gas mains,
Prospect Ave., etc. 2,590.10

F. B. Gallagher, Cash'r, Wages of laborers,

w'k end'g Dec. 29, 269.00

" James Boland, . . Retaining wall and

So. coal shed, . 2,500.00

\$428,505.63

\$428,505.68

\$296.00

206.00

42.32

65.32

703.21

MAINTENANCE AND REPAIRS, 1888.

	Jan. 9, F. B. Gallagher, Cash'r, Wages of laborers'
\$240.12	week end'g Jan. 1,
	" F. B. Gallagher, Cash'r, Wages of laborers'
269 .00	week end'g Jan. 7,
	Jan. 16, F. B. Gallagher, Cash'r, Wages of laborers'
334.25	w'k end'g Jan. 14,
	Jan. 23, F. B. Gallagher, Cash'r, Wages of laborers'
329.25	w'k end'g Jan. 21,
	" F. B. Gallagher, Cash'r, Wages of laborers'
	week ending Dec.
131.25	24, 1887,
	Jan. 30, M. Riter, Repairs, boiler No.
10.63	3, L. E. House, .
	" M. Riter, Repairs, boiler No.
6.52	ı, L. E. House, .
	" M. Riter, Repairs, boiler No.
20.55	4, L. E. House, .
11.38	" Farrar & Trefts, Forge and lathe w'k,
	" Farrar & Trefts, Repairs, engine No.
16.05	4, L. E. House, .
4.00	" The Courier Co., 2 cop. Daily Courier,
5.88	" Barnes, Hengerer & Co. Bags,
5.55	" Urban & Co., Meal and bran,
9.00	" Adams & White, Stationery,
29.75	" Laycock Lumber Co., Lumber,
4.75	" Goodyear Rubber Co., Rubber gaskets, etc.
3.15	" S. A. Huson, Clock repairs,

T T 16 1777111	_
	\$24.20
	.90
James D. Warren's	
Sons, Printing,	12.50
-	105.74
Sheeler & Sons, Screen,	19.00
Wm. H. Edson, Soft soap,	9.00
Jno. C. Post, Paint and varnish, .	1.50
M. Riter, Repairs to boiler	
No. 5,	187.03
M. Riter, Repairs to boiler	
No. 1,	79 .0 8
M. Riter, Repairs to boiler	
No. 2,	44.12
John Carter, Recutting files,	16.23
J. H. Ruckle & Co., . Globe valves, etc., .	22.30
Star Oil Co., Oil,	135.20
F. B. Gallagher, Cash'r, Wages of laborers'	
w'k end'g Jan. 28,	331.25
F. B. Gallagher, Cash'r, Pay roll, January, .	4,274.18
F. B. Gallagher, Cash'r, Postage stamps, .	50.00
Beals & Brown, Hardware,	11.79
J. Scatcherd & Son, . Lumber,	.96
R. Dunbar & Son, Rep. to coal hoist, .	50.25
M. Riter, Repair boiler tools,	9.84
Enterprise Oil Co., Oil,	12.00
Beals & Brown, ½-inch chain,	5.50
D. J. Stickney, Coal,	4.00
C. J. Heinold, Brooms,	3.63
	Walbridge & Co., Emery Cloth, James D. Warren's Sons, Printing,

	THE BUFFALO CITY WATER WORKS.	81
Feb. 20,	J. J. McWilliams, Wheeling coal,	\$149.22
44	Jno. Laughlin & Co., . Water bills,	45.00
"	Urban & Co., Meal and bran,	5.55
44	W. J. Nunan, Clinker boat,	41.00
"	Farrar & Trefts, Repairs machinery,	31.16
"	F. B. Gallagher, Cash'r, Wages, laborers',	-
	week ending,	328.50
"	F. B. Gallagher, Cash'r, Wages, laborers',	
	week ending,	323.64
"	F. B. Gallagher, Cash'r, Wages, laborers',	
	week ending,	327.76
Feb. 27	, F. B. Gallagher, Cash'r, Wages, laborers',	
	week ending,	413.50
44	F. B. Gallagher, Cash'r, Pay roll, February,	4,199.97
Mar. 5,	C. J. Heinold, Feed,	126.45
**	Goodyear Rubber Co., Hose,	6.25
"	Hardwicke & Ware, . Stem for valve,	1 50
**	Walbridge & Co., Hardware,	17.23
"	Felthousen & Russell, Wicking, etc	2.50
"	Matthews & Northrup, Printing,	21.00
• •	H. H. Baker & Co., . Oakum, rope, etc., .	19.73
4.	J. H. Ruckle & Co., . Rep. engine No. 4,	
	L. E. house,	10.66
44	Star Oil Co., Oil,	196.92
**	F. B. Gallagher, Cash'r, Wages, laborers'	
	week ending,	326.25
Mar. 12	, Miller Bros., Rep. sleigh No. 2, .	12.95
4.6	Miller Bros., Rep. wagon No. 7,	5.05

		
Mar. 12,	Miller Bros., Rep. wagons Nos. 1	* ***********************************
	and 7,	\$53.35
• "	Miller Bros., Rep. wagon No. 2,	67.62
• 6	Lytle & Co., 2 cans polish,	.70
• •	S. Sommerville & Son, Veterinary services,	11.00
44	Weed & Co., Hardware,	4.20
"	Felthousen & Russell, Chimneys, wicking,	
	etc.,	7.15
"	C. J. Drescher & Son, Pigeon hole boxes,	10.80
"	J. H. Sourwine, Cord Wood,	17.50
"	H. H. Edson, Soft soap,	9.00
	J. J. McWilliams, 4 ¹⁷ / ₂₀ tons of coal, .	23.51
"	F. B. Gallagher, Cash'r, Wages, laborers'	• •
	w'k end'g Mar. 10,	339.00
Mar. 10.	F. B. Gallagher, Cash'r, Wages of laborers,	
, = = = = = = = = = = = = = = = = = = =	w'k end'g Mar. 17,	325.50
Mar 26	Irlbacker & Davis, Pipe, sockets, nip-	J2J. J 0
Mui. 20,	ples, etc.,	91.64
44	Adams & White, Stationery,	63.31
"	•	
"	Howard Iron Works, Hydrant repairs, .	54.32
	C. J. Hamilton, Vault drawers,	11.22
"	Farrar & Trefts, Engine repairs,	8.45
"	Walbridge & Co., Hardware,	5.59
"	James D. Warren's Sons Printing,	33.50
"	Star Oil Co., Oil,	169.47
"	F. B. Gallagher, Cash'r, Pay roll March,	4,376.24
"	F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k end'g Mar. 24,	253.50

THE BUFFALO CITY WATER WORKS.	83
Apr. 2, F. B. Gallagher, Cash'r, Wages, laborers', w'k end'g Mar. 31,	\$246.50
Apr. 9, F. B. Gallagher, Cash'r, Wages, laborers',	
w'k end'g Apr. 2,	151.25
" Beals & Brown, Brass screws and	
wire,	1.63
" James Cayle, 2 wheel barrows, .	34.00
" D. J. Stickney, Coals,	4.00
" Holly M'f'g Co., Heater,	42.50
" Goodyear Rubber Co., Hose and gaskets,	23.99
Apr. 16, A. H. Brown, Forge and lathe w'k	11.40
" The Courier Co., Advertising,	4.00
" D. J. Stickney, Coal,	8.50
" C. J. Heinold, Box of soap, ,	6.75
" Holly M'f'g Co., Lock-	
port, N. Y., Iron and forging, .	12.53
" J. L. Mott, Iron Works,	
N. Y., Cast-iron basin,	2.75
" Goodyear Rubber Co., Hose, packing and	• •
gaskets,	25.87
" Becker & Wickser, Harness repairs, .	73.30
" F. B. Gallagher, Cash'r, Wages, laborers',	, , ,
w'k end'g Apr. 14,	159.50
" F. B. Gallagher, Cash'r, Wages, laborers',	
w'k end'g Apr. 21,	120.00
Apr. 30, Goodyear Rubber Co., Gaskets and ex. ch.	6.68
" Jno. Laughlin & Co., . Printing,	110.50
" Enterprise Oil Co., Grease,	12.00
zancerprise on co., . Grease,	. 2.00

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TWENTIETH ANNUAL REPORT OF 84 April 30, Jno. H. Ruckle & Co., Packing and cutting pipe, \$11.15 Felthousen & Whittet, Monkey wrench, etc. 9.60 Valentine Young & Horse brushes. . . 6.00 C. J. Heinold, . . . Brooms, 8.00 C. E. Brinkworth . . Stamp ribbons, . . 5.50 U.S. Electric Light Co. 50 C. P. lamp, etc., 46.85 " Wm. H. Edson, . . Soft soap, 9.00 " R. Hoffeld & Co., . . Belting, 17.86 .. R. Hoffeld & Co., . . Belting, 2.10 " Star Oil Co., . . . Oil, 169.37 " Western Union Tel.Co. Telegrams, . . . 5.61 Farrar & Trefts, . . Repairs, machinery, E. house, . . . 3.25 F. B. Gallagher, Cash'r, Pay roll, April, . . . 4,562.22 •• F. B Gallagher, Cash'r, Postage stamps, etc. 50.00 . . Urban & Co., . . . Feed, 5.35 . . Farrar & Trefts, . . Repairs to engines, 85.32 F. B. Gallagher, Cash'r, Postage stamps, etc. 50.00 May 21, C. W. Miller, . . . Coach hire, . . . 1.50 Jno. C. Post, . . . Paints and oil, . . .27 Goodyear Rubber Co., Top boots, serge coat, etc., . . . 20.64 Hardwicke & Ware, . 1 brass stem, . . . 1.00 Whitted, Barrett & Co., Flue cleaners, . . 7.87

Co., Printing,

7.50

Matthews, Northrup &

	THE BUFFALO CITY WATER WORKS.	85
May :	21, J. J. McWilliams, Coal,	\$15.00
44	Star Oil Co., Oil,	147.56
	James D. Warren's	
	Sons, Printing,	54.25
••	Walbridge & Co Dippers and scoops,	5.90
••	S. D. Colie, Lumber,	42.34
**	L. Hettrich, Jr., Repaving,	62.34
••	Adams & White, Stationery,	68.48
June	4, F. B. Gallagher, Cash'r, Pay roll, May,	4,225.46
••	L. Hettrich, Jr., Repaving,	395.15
••	J. H. Ruckle & Co., . White waste,	18.38
••	M. Riter, Repairs to boilers, .	115.44
••	Powell & Plimpton, . Liniment, oil, etc.,	12.10
••	W. H. Keeler, Stamps and pads, .	7.85
	The Bell Tele. Co., . Rent of telephone,	25.00
••	Beals & Brown, Hardware,	16.33
June	11, Jas. D. Warren's Sons, Printing,	30.50
**	C. J. Heinold, Oats,	116.67
••	Int. Ferry Co., Tug hire,	120.00
• 6	D. E. Morgan, 4 shades,	3.60
• •	Whitted, Barrett & Co. White waste,	9.88
•	The Bell Tele. Co., . Moving telephone,	1.00
••	Urban & Co., Feed,	5.60
••	Jno. C. Post, Paint,	4 35
••	Goodyear Rubber Co., Packing,	73 42
••	Buffalo Natural Gas	
	Fuel Co., Nat. gas for May at	
	engine house,	1,600.00
• •	F. B. Gallagher, Cash'r, Postage stamps, etc.	50.00

June 25, A. H. Brown, 9 hours drill,	\$3.60
" Union Water Meter Co. Meter repairs,	10.05
" Beals & Brown, Iron and steel,	80 38
" H. H. Baker & Co., . Manilla rope, etc., .	9.94
" The Courier Lith. Co., Letter heads,	22.50
" D. McNaughton, 20 feet of chain, .	4.72
" H. R. Worthington, . Meter repairs,	23.20
" Fries & Co., Meter repairs,	5.05
" S. Summerville & Son, Veterinary services,	18.00
" J. Schoellkopf's Sons, Tan bark,	1.00
" Western Union Tel.Co. Telegrams,	5.48
" Adams & White, Stationery,	43.45
" Leo. Hettrich, Jr., . Repaving,	397.32
" F. B. Gallagher, Cash'r, Pay roll June,	4,092.04
July 2, The Bell Tele. Co., . Rent of telephone,	130.00
" A. Scheu, Horse bedding,	27.00
" Star Oil Co., Oil,	156.78
" The Bell Tele. Co., . Messenger service, .	3.65
" Jno. Laughlin & Co., . Printing,	155.50
" The Buffalo Demokrat, Advertising,	22.00
" Wall & Sons, Brick and clay,	179.25
" James Boland, Mason labor,	91.75
" A. L. Barber, Repaying (asphalt),	121.67
" Farrar & Trefts, Forging and drilling	33-54
" Irlbacker & Davis, Pipe, plugs, etc., .	52.15
" Buff. Nat'l Gas Fuel Co. Natural gas for June	
at engine house, .	2,165.90
July 16 H. G. White, Painting at office, .	5.60
" W. H. Edson, Soft soap,	10.00
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THE BUFFALO CITY WATER WORKS. 87	,
July 16, J. H. Ruckle & Co., . Cotton wicking, etc. \$10.70)
" Adams & White, Stationery, 23.99)
" A. L. Barber, Repaving, (asphalt) 35.00)
" Lesswing & Stines, . Wagon repairs, 10.75	j
" The Courier Co., Advertising, 4.00)
" C. J. Heinold, Oats, hay, etc., 158.90)
" Goodyear Rubber Co., Gaskets, 51.37	,
" Becker & Wickser, . Harness repairs, . 88.85	
" J. H. Ruckle & Co., . Waste, packing, etc. 178.92	;
" Hardwicke & Ware, . Corp'n cocks, etc., 186.30)
" Lehigh Valley Coal Co. Coal, 16,737.75	i
" F. B. Gallagher, Cash'r, Postage stamps, . 50.00)
July 23. A. H. Brown, Corporation cocks	
and services, 10.05	,
" Star Oil Co., Oil, 159.87	,
" Reed & Brown, Iron and steel, 3.30)
" Leo. Hettrich, Jr., Repaving, 480.04	
" Buffalo Natural Gas	
Fuel Co., Natural gas for July	
at engine house, . 1,800.00	,
" Jno. T. Rees, Registrar, Pay roll, July, 4,358.13	
Sept. 4, C. Sturm, Expansion rings, . 4.80)
" J. D. Warren's Sons, . Printing, 17.50)
" Reinecke & Zesch, . Advertising, 22.00)
" Walbridge & Co., Hardware, 5.50)
" Whitted, Barrett & Co. Waste, 8.93	ı
" J. D. Warren's Sons, . Printing, 21.00)
" V. Young & Son, Brooms, 6.00)
" Weed & Co., Hardware, 23.03	

Sept.	4, J. D. Smith, Labor,	\$ 4.50
44	The Volker-Felthousen	
	Manufacturing Co., . Iron plungers, and	
	piston rod,	24.25
"	Jno. C. Post, Paint,	2.75
44	Buff. Sewer Pipe Co., Tile, pipe, etc.,	60.30
44	J. D. Warren's Sons, . Advertising,	38.01
44	L. Brechtel, Washing towels for	
	office,	4.75
44	M. Riter, Repairs to boiler, .	3.25
"	Howard Iron Works, Rep. to lawn mower,	16.00
"	W. H. Keeler, Hand stamp,	-35
"	Buff. Gas. Light Co., . Coke,	21.00
"	M. Riter, Repairs to boiler, .	4.88
"	J. D. Smith, Rep. to water main,	3.40
"	Western Union Tel.Co. Telegrams,	3.×3
"	Star Oil Co., Oil,	204.50
"	A. L. Barber, Repaving (asphalt),	151.66
"	M. Riter, Repairs to boilers, .	112.11
"	Beals & Brown, Hardware,	68.78
44	Goodyear Rubber Co., Gasket and packing,	36.86
"	H. H. Baker & Co., . Rope and Oakum, .	188.86
"	Farrar & Trefts, Repairs machinery.	123.40
"	Miller Bros., Wagon repairs,	37.10
••	James Boland, Mason work, etc., .	51.53
"	A. H. Brown, Forging and drilling	34.00
**	The Courier Co., 2 cop. city directory,	9.00
44	Adams & White, Stationery,	24.40
4.6	Leo Hattrich Ir Ranguing	144.19

	THE BUFFALO CITY WATER WORKS.	89	
Sept. 4,	C. J. Heinold, Hay, oats, etc.,	\$153.83	
44	F. B. Gallagher, Cash'r, Pay roll August, .	4,508.76	
• •	E. L. Hedstrom, Coal,	13,210.83	
**	Buffalo Nat. Gas Fuel		
	Co., Nat. gas for August		
	at engine house,.	2,200 25	
**	F. B. Gallagher, Cash'r, Pay roll Sept.,	4,413.08	
	Valentine & Son, Plates for reg., etc.,	2.00	
4.	Jno. C. Post, Paint,	1.57	
46	Enterprise Oil Co., Oil,	24.00	
Sept. 24,	C. J. Frank, Sledge and hammer		
	handles,	33-33	
44	C. J. Heinold, Feed, '	77.14	
**	Star Oil Co., Oil,	168.20	
••	S. Summerville & Son, Veterinary services,	15.00	
••	W. H. Edson, Soft soap,	10.00	
**	Adams & White, Stationery,	20.43	
4.	F. Schottin, Binding,	37.50	
**	Enterprise Oil Co., Oil,	12.00	
44	J. H. Ruckle & Co., . Packing and sheet		
	lead,	27.24	
44	Whitted, Barrett & Co. White waste,	25.22	
**	L. Hettrich, Jr., Repaving,	28.66	
**	Becker & Wickser, . Harness repairs, .	29.80	
. "	Farrar & Trefts, Repairs, machinery,	81.68	
"	J. H. Ruckle & Co., . Pipe, wire, etc.,	100.00	
**	F. B. Gallagher, Cash'r, Postage stamps, .	50.00	
••	H. H. Baker & Co., . Rope, etc.,	37.58	

TWENTIETH ANNUAL REPORT OF 90 Sept. 24, The U.S. Electric Light and Cable Co., Candle power lamps, **\$**63.00 Matthews, Northrup & Co., Printing, 7.50 The Engineering News Publishing Co., . . Copy Engineering News, 5.00 Felthousen & Sher-. . . . Dog for oil pump, . .75 1, W. Union Telegraph Oct. Co., Telegrams,71 James Boland, . . . Mason work, etc., . 101.60 Farrar & Trefts, . . Rep. to machinery, 240. I I Goodyear Rubber Co., Pack'g and gaskets, 49.38 " A. L. Barber, . . . Repaving (asphalt), 79.75 " Leo. Hettrich, Jr., . . Repaving, 15.62 " N. Y., L. E. & W. R. R. Co., Freight charges, 18.23 " Buff. Natural Gas Fuel Co., Natural gas, month of Sept., at engine house, 1,855.23 E. L. Hedstrom, . . Coal, 2,891.86 " Urban & Co., . . . Feed, 4.50 46 A. T. Lytle, Feed, 85.82 Bigham & Taylor, . Valve boxes, . . 169.67 J. D. Warren's Sons, . Printing, 126.00 Oct. 29, F. B. Gallagher, Cash'r, Pay roll, October, . 4,494.49 Nov. 12, E. L. Hedstrom, . . Coal,

3,309.62

THE BUFFALO CITY WATER W	ORKS. 91
Nov. 12, F. B. Gallagher, Cash'r, Postage stan	nps, . \$50.00
" Buffalo Nat. Gas Fuel	
Co., Natural gas i	or Oct.
at engine h	ouse 1,828.82
Nov. 19, W. H. Keeler, Noiseless bar	nd, 3.50
" Jos. Endres, Stamp ribbo	ns, 6.00
" R. Hoffeld & Co., 3 hours' labor	or, 1.50
" N. Moerschfelder, Horse clippe	ers, 1.25
" The Courier Co., Daily Courie	er, 4.00
" Hawley Klein, Single paten	t bloc k, 4.00
" J. J. McWilliams, Coal,	5.50
" Hoddick & Co., Frame,	3.00
" U. S. Electric Light	
and Power Co., 1 roll kerigh	t, 1.00
" C. J. Hamilton, Signs and ba	ands, . 8.00
" Matthews, Northrup	
& Co., Printing, .	30.00
" Mann Bros. & Co., Oil,	26.12
" Lake Erie Boiler W'ks, Boiler plates	s, 64.08
" The Bell Tele. Co., . Rent of tele	ephone, 25.00
" Jno. Laughlin & Co., . Printing, .	57.00
" Harvey Bros., Oats,	
" William Walrath, Saw dust, .	· -
" J. Simon, Carrots, .	17.50
" Jas. D. Warren's Son's, Printing, .	55.00
" A. L. Barber, Repaving,	11.00
" Goodyear Rubber Co., Gaskets,	
" Whitted, Barrett & Co., Waste,	
" F R Gallagher Cash'r Postage stan	

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TWENTIETH ANNUAL REPORT OF 92 Nov. 19, Jos. B. Blake, . . . Lighter, \$60.00 C. J. Heinold, . . . Hay, 295.33 " Goodyear Rubber Co., Packing, 31.31 Jos. Churchyard Sons, Repairing bellows,. 5.00 Beals & Brown, . . Hardware, 8 96 .. Star Oil Co., . . . Oil, 199.14 " Jos. Churchyard Sons, Lumber, 582.91 Hardwicke & Ware, . Bolts and pipe, . . 61.76 ٠. M. O. Kasson, . . . Lub. compound, 32.40 46 Fox & Holloway, . . Sand, 9.37 " Swift & Stambach, . Gasoline, 3.45 .. Fowler & Sons, . . . Steel, 2.25 Weed & Co., Hardware, . . . 2.14 Nov. 26. French & Kirkholder, Brooms, 3.30 Powell & Plimpton, . Liniment, . . . 2.65 U.S. Electric Light and Power Co., . . . Weatherproof copper wire, . . . 319.28 .. J. Laughlin & Co., . Printing, 131.69 " Star Oil Co., . . . Oil, 118.95 F. B. Gallagher, Cash'r, Pay roll, November, • • 4,501.54 Leo. Hettrich, Jr., . . Repaving, 72.26 " J. H. Ruckle & Co., . Rubber packing, . 22.56 .. Farrar & Trefts, . . Repairs, machinery, 70.06 A. L. Barber, . . . Repaving (asphalt), 16.25 .. Lesswing & Stines, . Wagon repairs, . . 20.00

Irlbacker & Davis, Pipe, etc., . . .

17.58

..

94.45

Dec. 31, Jos. E. Barnard, Comp't Gas bills, 1888, . . . \$694.62

"Jos. E. Barnard, Comp't Rebate front'e tax, 100.50

143,129.86

Less for order drawn by order of Common Council to rebate frontage tax cancelled,

4.10

\$143,125.76

SERVICES.

There were added three thousand one hundred and ninetytwo new services during the year.

The total number of services in the city, January 1, 1889, is thirty-two thousand six hundred and fifty-nine.

There has been but slight change in value of water furnished for city purposes since last year's report. The value of water furnished at ordinance prices would be, viz.:

RECAPITULATION.

Fire Departmen	t,												\$ 677.70
Public Parks,													1,225.00
Police Departm	en	t,											1,096.30
Public Schools,													4,250.00
Public Buildings	٠,												8,025.25
Fire Hydrants,	Dr	in	kin	ıg .	For	ant	ain	ıs, e	etc	.,	•		123,300.00
Total, .							•						\$ 3138,574.25

The general office accommodation is inadequate to properly transact the large increase of business. The importance and urgency of more roomy office accommodation being well understood by your honorable body, I would respectfully urge your hearty co-operation with other interested parties in pushing forward the "annex" contemplated to be built on land recently purchased.

Respectfully submitted,

JOHN T. REES, Registrar.



DISTRIBUTION

OF THE

WATER DEPARTMENT

FOR THE

YEAR 1888.

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FIRE HYDRANTS.

The number of Fire Hydrants placed on new line of mains was 146, of which 78 was on the high service, and 68 on the reservoir supply, making the total number in the city December 31, 1888, 2,286. Following schedule gives location of hydrants set during 1888:

Location.	System.	Sewered.
Ashland Avenue, west side, 480 feet north of Sum-		
mer Street,	Н.	
Ashland Avenue, southwest corner of Utica Street,	Н.	
Ashland Avenue, southwest corner of Bouck		
Avenue,	H.	
Avenue A, southwest corner of Ferry Street, .	Н.	
Avenue A, southwest corner of Landon Street, .	H.	
Abbott Road, south side, 220 feet west of Euclid		
Place,	R.	
Abbott Road, south side, east of Erie railroad, .	R.	
Ashley Street, southeast corner of Mohr Street, .	R.	
Ashley Street, 585 feet east of Mohr Street,	R.	
Bowen Street, 450 feet north of Broadway,	R.	
Bowen Street, 900 feet north of Broadway,	R.	
Bowen Street, 450 feet south of Sycamore Street,	R.	
Bowen Street, southwest corner of Sycamore		
Street,	R.	
Bowen Street, 1,075 feet south of Walden		
Avenue,	R.	S.
Bowen Street, 540 feet south of Walden Avenue,	R.	S.

Location.	System.	Sewered.
Bowen Street, southwest corner of Walden		
Avenue,	R.	S.
Bridgeman Street, southwest corner of Logan		
Street,	R.	
Bridgeman Street, southwest corner of Groto		
Street,	R.	
Bridgeman Street, southwest corner of Chandler		
Street,	R.	
Bird Avenue, northwest corner of Tryon Place, .	R.	S.
Bird Avenue, northwest corner of Barry Street, .	R.	S.
Bailey Avenue, between Borgardus Street and		
Euclid Street,	R.	
Balcom Street, centre of block between Linwood		
Avenue and Michigan Street,	Н.	
B. Street, southwest corner of Mills Street,	R.	S.
Bristol Street, southwest corner of Lord Street, .	R.	
Broadway, northwest corner of Loepere Street, .	R.	
Breckenridge Street, southeast corner of Grant		
Street,	Н.	
Breckenridge Street, southwest corner of Preston		
Street,	Н.	
Chicago Street, northeast corner of Exchange		
Street,	R.	S.
Carroll Street, northeast corner of Chicago Street,	R.	S.
Clemo Street, 290 feet north of Broadway,	R.	
Chester Street, southwest corner of Puffer Street,	Н.	S.
Cooper Street See feet east of Main Street	П	c

Н.

S.

THE BUFFALO CITY WATER WORKS.

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Location.	System.	Sewered.
Genesee Street, southeast corner of Ellicott		
Street,	H.	S.
Genesee Street, southeast corner of Ash Street, .	Н.	
Genesee Street, southwest corner of Spruce Street,	Н.	
Genesee Street, southeast corner of Walnut		
Street,	H.	
Genesee Street, southeast corner of Pratt Street,	Н.	S.
Genesee Street, southeast corner of German		
Street,	Н.	
Genesee Street, southwest corner of Mortimer		
Street,	H.	
Genesee Street, southeast corner of Camp Street,	H.	
Genesee Street, southeast corner of Davis Street,	H.	
Genesee Street, centre of block between Davis		
Street and Jefferson Street,	H.	S.
Genesee Street, southwest corner of Jefferson		
Street,	Н.	S.
Genesee Street, southeast corner of Adams Street,	H.	S.
Genesce Street, southeast corner of Grey Street,	Н.	S.
Genesee Street, southwest corner of Johnson		
Street,	Н.	S.
Genesee Street, southeast corner of Fox Street, .	Н.	S.
Genesee Street, southeast corner of Herman		
Street,	H.	S.
Girard Place, southeast corner of Humboldt Park-		
way,	H.	
Girard Place, centre of block between Humboldt		
Parkway and Avenue A		

Location.	System.	Sewered.
Girard Place, southwest corner of Avenue A,	Н.	
Gibson Street, northwest corner of Curtis Street,	R.	
Gibson Street, centre of block between Curtis		
Street and Peckham Street,	R.	S.
Gibson Street, northwest corner of Peckham		
Street,	R.	S.
Gibson Street, centre of block between Peckham		
Street and Lovejoy Street,	R.	S.
Garfield Street, centre of block between Luding-		
ton Street and Lovejoy Street,	R.	
Gold Street, northwest corner of William Street,	R.	
Gold Street, centre of block between William		
Street and Ludington Street,	R.	
Gold Street, centre of block between Ludington		
Street and Lovejoy Street,	R.	
Gold Street, centre of block between Lovejoy		
Street and Vanderbilt Street,	R.	
Gold Street, southwest corner of Vanderbilt		
Street,	R.	
Gold Street, southwest corner of Broadway,	R.	
Gurnsey Street, southwest corner of Hertle		
Avenue,	R.	
Herkimer Street, southwest corner of Annie Place,	Н.	
Humboldt Parkway, southwest corner of Landon		
Street,	Н.	s.
Humboldt Parkway, southwest corner of Win-		
slow Avenue.	Н.	

Location.	System.	Sewered.
Humboldt Parkway, southwest corner of Wood-		
land Avenue,	Н.	
Humboldt Parkway, northwest corner of Ferry		
Street,	Н.	
Hauf Street, southwest corner of Landon Street,	Н.	S.
Hertle Avenue, northwest corner of Tonawanda		
Street,	R.	
Howard Avenue, west side, centre of block be-		
tween Bryant and Utica streets,	н.	S.
Howard Avenue, southwest corner of Utica Street,	H.	
Howard Avenue, southwest corner of Brecken-		
ridge Street,	Н.	
Howard Avenue, southwest corner of Auburn		
Avenue,	H.	
Hoyt Street, southwest corner of Delavan Avenue,	H.	S.
Hoyt Street, southwest corner of Bird Avenue, .	H.	S.
Harwood Place, south side, 250 feet east of Jeffer-		
son Street,	Н.	
Jefferson Street, southeast corner of Landon		
Avenue,	Н.	S.
Jefferson Street, northwest corner of William		
Street,	R.	S.
Jewett Avenue, southwest corner of Davis Street,	H.	
Klaus Street, southwest corner of Jones Street, .	R.	S.
Kehr Street, southwest corner of Puerner Avenue,	Η.	
Kehr Street, southwest corner of Fougeron Street,	Н.	
Kail Street, west side, centre of block between		
Amherst Street and Austin Street	R.	

Location.	System.	${\bf Sewered.}$
Laurel Street, south side, opposite Purdy Street,	Н.	
LombardStreet, northwestcornerofCurt isStreet,	R.	S.
Lombard Street, west side, 300 feet north of Curtis		
Street,	R.	
Lombard Street, northwest corner of Peckham		
Street,	R.	
Lombard Street, west side, centre of block be-	•	
tween Peckham and Lovejoy Streets,	R.	
Loepere Street, west side, 385 feet north of Broad-		
way,	R.	
Loepere Street, west side, 615 feet south of Stan-		
islaus Street,	R.	
Loepere Street, northwest corner of Stanislaus		
Street,	R.	
Loepere Street, southwest corner of Sycamore		
Street,	R.	
Lovejoy Street, southeast corner of Sears Street,	R.	
Lathrope Street, southwest corner of Sycamore		
Street,	R.	
Michigan Street, west side, center of block be-		
tween Bouck Avenue and Balcom Street, .	Н.	
Mortimer Street, northwest corner of William		
Street,	R.	S.
Metcalfe Street, opposite Thomas Street,	R.	S.
Moreland Street, northeast corner of Bailey		
Avenue,	R.	
Nineteenth Street, southeast corner of Ferry		
Street	П	

Location.	System.	Sewered
North Central Avenue, southwest corner of		
Broadway,	R.	
Olmstead Avenue, southwest corner of Bailey		
Avenue,	R.	
Pine Street, southwest corner of South Division		
Street,	R.	
Pink Street, southeast corner of Lord Street,	R.	S.
Perry Street, southwest corner of Smith Street, .	R.	S.
Purdy Street, southwest corner of Woodland		
Avenue,	Н.	
Purdy Street, west side 500 feet north of Harlow		
Place,	Н.	
Riley Street, south side, 350 feet west of Michi-		
gan Street,	Н.	
Roherer Avenue, southwest corner of Landon		
Street,	Н.	S.
Regent Street, northeast corner of Bailey Avenue,	R.	
Sweet Avenue, opposite Kent Street,	R.	
St. Stephen's Place, southwest corner of the		
Abbott Road,	R.	
Smith Street, opposite St. Stephens Place,	R.	S.
Stone Street, northeast corner of Bailey Avenue,	R.	
Sobisky Street, southwest corner of Sycamore		
Street,	R.	
Tennesee Street, northeast corner of Sandusky		
Street,	R.	
Tryon Place, southwest corner of Delavan Avenue	Н.	
Utica Street, southwest corner of Avenue A,	Η.	

Total hydrants in the city December 31, 1888,

2,284

FIRE RESERVOIRS.

Location.	Number.
Main Street, in front of Spaulding's Exchange, . H.	I
Main Street, in front of Lafayette Park, H.	I
Main Street, in front of churches, S.	I
Main Street, corner of Exchange, H.	I
Main Street, corner of Seneca, S.	I
Main Street, corner of Swan, H.	I
Main Street, corner of North Division, S.	I
Main Street, corner of Eagle, S.	I
Main Street, corner of Genesee, S.	I
Seneca Street, corner of Chicago, S.	I
Goodell Street, corner of Washington, H.	1
Niagara Square, junction of Genesee and Court, S.	1
Niagara Street, corner of Mohawk,	I
Eagle Street, corner of Genesee, No water connection,	1
Broadway, in front of Arsenal, H.	I
Clinton Street, corner of Union, H.	I
	_
Total,	16
Those marked "H" raised valves at curb.	
Those marked "S" have surface valves in streets.	
DRINKING FOUNTAINS.	
Location.	Number.
Delaware Avenue, corner of Court,	I
Main Street, corner of Seneca,	I
16 : C	

THE BUFFALO CITY WATER 1	Works.		109
Location.			Number.
Main Street, opposite Court,			I
Main Street, corner of Huion,			I
Michigan Street, corner of Seneca,			I
Michigan Street, corner of Broadway, .			I
Michigan Street, corner of Genesee,			1
Washington Market,			I
Total,	. 		9
HORSE FOUNTAINS.			
Location.			Number.
Broadway, in front of Arsenal,			I
Elk Street, between East and West Market	t,		I
Elk Street, front of Atlas Refining Compar	ny, .		ı
Elk Street, corner of Hamburgh,			I
Erie Street, between Seneca and Terrace,	. . .		I
Forest Avenue, opposite No. 54,			I
Genesee Street, between Lower and Upper	Terrace	, .	I
Genesee Street, corner of Ellicott,			I
High Street, corner of Genesee,			I
Main Street, corner of Ferry,			I
Main Street, corner of Steele,			I
Maryland Street, corner of Fifth,			1
Niagara Street, between Eagle and Frankli	n,		I
Niagara Street, corner of Prospect Avenue	,		I
Niagara Street, corner of Clinton Avenue, .			I
Niagara Street, corner of Amherst (old styl	le), .		I
Niagara Street, corner of Austin (old style)	,		1

TWENTIETH ANNUAL REPORT OF

Location.		Number.
Niagara Street, corner of Hertel Avenue,		I
Swan Street, at junction with Seneca,		I
West Avenue, between York Street and Porter Aven	ue,	I
York Street, corner of Thirteenth,		
Best Street, north side, 100 feet west of Jefferson,		1
Clinton Street, north side, 100 feet west of Emslie,		I
Clinton Street, opposite Jones Street,		1
Total,		24
•		
FREE HYDRANTS.		
Location.		Number.
Chicago Street, northwest corner of Mackinaw, .		I
Chicago Street, northwest corner of Mackinaw,		I I
-	 	_
Chicago Street, southeast corner of Fulton,		I
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh,		I
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh, Exchange Street, north side, between Jefferson Hamburgh,	and 	I I
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh, Exchange Street, north side, between Jefferson Hamburgh,	and 	I I
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh, Exchange Street, north side, between Jefferson Hamburgh,	and h, .	I I I I
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh, Exchange Street, north side, between Jefferson Hamburgh,	and h, .	1 1 1 1 1
Chicago Street, southeast corner of Fulton, Elk Street, southeast corner of Hamburgh, Exchange Street, north side, between Jefferson	and	1 1 1 1 1

NUMBER AND LOCATION OF VALVES SET IN 1888.

The number of valves set during the year was two hundred and forty-eight, of which two hundred and twenty were placed upon new line of mains, fifteen on old line of mains, eleven at pump house, two on private line of pipe. The following statement gives size and location of valves set, viz.:

36	inch,										14
30	inch,										2
24	inch,										2
20	inch,										4
16	inch,										13
12	inch,										4
ю	inch,										20
6	inch,										162
4	inch,										25
3	inch,			٠							2
										-	248

Ashland Avenue, n. w. c. of Summer Street, 6 inch H., 46½ w. and 13 n. of hydrant.

Ashland Avenue, s. w. c. of Anderson Place, 6 inch H., 14 e. and 23½ s. of hydrant.

Ashland Avenue, n. w. c. of Auburn Avenue, 6 inch H., 13½ e. and 49½ n. of hydrant.

Ashland Avenue, s. w. c. of Bouck Avenue, 6 inch H., 8½ e. and 4½ n. of hydrant.

- Ashland Avenue, east of 6 inch pipe for Hodge Avenue, 6 inch H., 9 n. and 29 w. of hydrant.
- Avenue A, s. w. c. of Landon Street, 16 inch H., 9 n. and 12 e. of hydrant.
- Avenue A, n. w. c. of Roeder Street, 16 inch H., 42 w. and 6 n. of n. e. c.
- Avenue A, 6 inch to hydrant s. w. c. of Landon Street, 6 inch H., 7½ e. of hydrant.
- Ashley Street, s. e. c. of Mohr Street, 6 inch R., 20 n. of s. e. c. Austin Street, s. w. c. of Niagara Street, 2 inch R., 24 n. and 13 w. of hydrant.
- Ash Street, south of 10 inch pipe in Genesee Street, 4 inch R., 25 n. and 33 w. of s. e. c.
- Bowen Avenue, s. w. c. of Sycamore Street, 6 inch R., 14 e. and 21 n. of hydrant.
- Bowen Avenue, s. w. c. of Walden Avenue, 6 inch R., 22 e. of s. w. c.
- Bridgeman Street, n. e. c. of Amherst Street, 6 inch R., 9 s. and 14 w. of hydrant.
- Bird Avenue, n. e. c. of Tryon Place, 6 inch H., 24 s. of n. e. c. Balcom Street, n. e. c. of Linwood Avenue, 6 inch H., 26 s. and 4 e. of n. e. c.
- B Street, s. c. c. of Fillmore Avenue, 6 inch H., 191/2 n. and 10 w. of s. e. c.
- Bristol Street, s. e. c. of Bond Street, 4 inch R., 24 n. of hydrant.
- Breckenridge Street, s. e. c. of Grant Street, 6 inch H., 22 n. and 3 e. of s. e. c.

- Breckenridge Street, s. e. c. of Preston Street, 6 inch H., 7½ n. and 64 e. of hydrant.
- Bailey Avenue, east of 16 inch pipe for Olmstead Avenue, 6 inch R., 6 n. and 43 e. of hydrant.
- Bailey Avenue, east of 16 inch pipe for Stone Street, 6 inch R., 8½ s. and 17 w. of hydrant.
- Bailey Avenue, east of 16 inch pipe for Regent Street, 6 inch R., 8½ s. and 22 w. of hydrant.
- Bailey Avenue, east of 16 inch pipe for Moreland Street, 6 inch R., 8½ s. and 11½ w. of hydrant.
- Bailey Avenue, 6 inch for hydrant between Borgardus and Euclid Street, 6 inch R., 5 w. of hydrant.
- Bailey Avenue, east of 16 inch pipe for Dempster Street, 6 inch R., 9 n. and 29 w. of hydrant.
- Cleveland Avenue, n. w. c. of Delaware Avenue, 6 inch H., 17 s. of n. w. c.
- Chicago Street, n. e. c. of Exchange Street, 16 inch R., 25 w. and 3 s. of n. e. c.
- Chicago Street, s. e. c. of Seneca St., 16 inch R., 32 n. and 27 w. of s. e. c.
- Chicago Street, 6 inch to hydrant n. e. c. of Exchange Street, 21 w. and 2 n. of n. e. c.
- Chicago Street, 6 inch to hydrant branch, west of 16 inch pipe, 30 w. and 2 n. of n. e. c. of Exchange Street.
- Chicago Street, 4 inch to Boller & Rechtenwalt's planing mill, 49 n. and 10 w. of n. e. c.
- Clemo Street, s. w. c. of Clinton Street, 6 inch R., 16½ e. and 49 s. of n. w. c.

- Carroll Street, s. w. c. of Heacock Street, 4 inch R., 32 s. and 2 e. of n. w. c.
- Chester Street, s. w. c. of Puffer Street, 6 inch H., 4 e. and 20 n. of hydrant.
- Cooper Street, s. e. c. of Main Street, 6 inch H., 24 n. and 19 w. of s. e. c.
- Crescent Avenue, s. w. c. of Jewett Avenue, 6 inch H., 5½ e. and 12½ n. of hydrant.
- Carolina Street, s. e. c. of Prospect Avenue, 6 inch R., 27 n. and 17 w. of s. e. c.
- Delavan Avenue, south of 16 inch for Linwood Avenue, 6 inch, 22 n. and 40 e. of s. w. c.
- Delavan Avenue, south of 16 inch for Michigan Street, 6 inch, 13 n. and 22 e. of s. w. c.
- Delavan Avenue, s. e. c. of Michigan Street, 16 inch H., 24 n. of s. e. c.
- Delavan Avenue, s. w. c. of Main Street, 16 inch H., 38 n. and 6 w. of s. w. c.
- Delavan Avenue, valve for hydrant in centre of block between Delaware Avenue and Linwood Avenue, but no hydrant put in, 6 inch H., 18 n. and 380 e. of s. e. c. of Delaware Avenue.
- Delavan Avenue, valve for drain in the sewer in the centre of the block between Linwood Avenue and Michigan Street, 6 inch H., 22 n. and 243 e. of s. e. c. of Linwood Avenue.
- Delavan Avenue, valve for hydrant ¼ way between Michigan Street and Main Street, but no hydrant put in, 6 inch H., 21 n. and 410 e. of s. e. c. of Michigan Street.

- Delavan Avenue, valve for hydrant 34 way between Michigan Street and Main Street, but no hydrant put in, 6 inch H., 20 n. and 418 w. of s. w. c. of Main Street.
- Delavan Avenue, s. w. c. of West Chapin Park, 6 inch H., 386 s. and 13 w. of hydrant on West Chapin Park, opposite General Graves' house.
- Delavan Avenue, s. w. c. of Tryon Place, 6 inch H., 22 n. and 10 w. of hydrant.
- Dewitt Street, s. w. c. of Clinton Avenue, 6 inch R., 26 e. of s. w. c.
- Davey Street, s. w. c. of Lovejoy Street, 6 inch R., 25 e. of s. w. c.
- Davey Street, n. w. c. of Ludington Street, 6 inch R., 25 e. of n. w. c.
- Dupont Street, north of Ferry Street, in centre of Ferry Street, 6 inch H., 7 w. and 32½ n. of hydrant s. e. c.
- Elmwood Avenue, n. w. c. of Summer Street, 6 inch H., 30 e. and 2 n. of n. w. c.
- Elmwood Avenue, n. w. c. of Bryant Street, 6 inch H., 30 e. and 16 s. of n. w. c.
- Elmwood Avenue, n. w. c. of North Street, 6 inch H., 30 e. and 41 s. of n. w. c.
- Elmwood Avenue, s. w. c. of Summer Street, 6 inch H., 29 e. and 26 s. of n. w. c.
- Effner Street, centre of Virginia Street, 4 inch R., 21 w. and 29 s. of hydrant.
- Euclid Place, n. w. c. of the Abbott Road, 4 inch R., 4½ e. and 5 s. of hydrant.

- Fillmore Avenue, n. e. c. of C Street, 6 inch H., 22½ w. and 2 n. of n. e. c.
- Fillmore Avenue, s. e. c. of A Street, 6 inch H., 19 w. and 57 s. of n. e. c.
- Fargo Avenue, n. w. c. of Pennsylvania Street, 6 inch H., 30 e. and 2 n. of n. w. c.
- Fargo Avenue, s. w. c. of Jersey Street, 6 inch H., 31 w. and 4 s. of s. e. c.
- Florida Street, n. e. c. of Main Street, 4 inch H., 16 w. and 9 s. of n. e. c.
- Ferry Street, s. e. c. of Jefferson Street, 12 inch H., 40 s. and 11 e. of n. e. c.
- Fourth Street, s. w. c. of Jersey Street, 4 inch R., 2 n. and 17 e. of hydrant.
- Fourth Street, n. w. c. of Pennsylvania Street, 4 inch R., 20 s. and 21 e. of n. w. c.
- Fourth Street, n. e. c. of Virginia Street, 6 inch R., 6 w. and 4 s. of hydrant.
- Fougeron Street, in centre of Avenue A, 6 inch R., 26 e. and 17 n. of s. w. c.
- Fougeron Street, s. w. c. of Kehr Street, 6 inch R., 15½ n. and 10 w. of hydrant.
- Genesee Street, centre of Main Street, 4 inch H., 45 s. and 32 e. of hydrant n. w. c.
- Genesee Street, s. e. c. of Main Street, 10 inch H., 52 n. and 36 inches w. of s. e. c.
- Genesee Street, centre of Washington Street, 10 inch H., 50 w. and 56 n. of s. e. c.

- Genesee Street, centre of Washington Street, 10 inch H., 41 w. and 56 n. of s. e. c.
- Genesee Street, s. w. c. of Oak Street, 10 inch H., 44 n. and 90 w. of s. e. c.
- Genesee Street, s. e. c. of Michigan Street, 10 inch H., 40 w. and 37 n. of s. e. c.
- Genesee Street, s. e. c. of Walnut Street, 10 inch H., 26 e. and 27 n. of s. w. c.
- Genesee Street, s. w. c. of German Street, 10 inch H., 23 n. and 13 e. of s. w. c.
- Genesee Street, s. e. c. of Camp Street, 10 inch H., 24 w. and 27 n. of s. e. c.
- Genesee Street, s. w. c. of Jefferson Street, 10 inch H., 45 w. and 33 n. of s. e. c.
- Genesee Street, s. e. c. of Jefferson Street, 10 inch H., 29 n. and 4 w. of s. e. c.
- Genesee Street, s. e. c. of Johnson Street, 10 inch H., 27½ n. and 4 e. of s. e. c.
- Genesee Street, 4 inch H., for the planing mill between Herman Street and Straus Street, 23 n. and 77 w. of s. w. c.
- Girard Place, s. w. c. of Avenue A, 6 inch H., 191/2 e. and 17 n. of s. w. c.
- Gerhard Street, n. w. c. of Dodge Street, 6 inch H., 21 1/2 e. of n. w. c.
- Gerhard Street, s. w. c. of Northampton Street, 6 inch H., 22½ e. of s. w. c.
- Gibson Street, s. w. c. of Peckham Street, 6 inch R., 18 e. and 3 s. of s. w. c.

- Gibson Street, s. w. c. of Lovejoy Street, 6 inch R., 16 e. and 5 s. of s. w. c.
- Garfield Street, centre of Ludington Street, 6 inch R., 42 w. and 14 s. of n. c. c.
- Garfield Street, s. e. c. of Lovejoy Street, 6 inch R., 8 w. and 10 s. of hydrant.
- Gold Street, s. w. c. of Ludington Street, 6 inch R., 26 n. and $26\frac{1}{2}$ e. of s. w. c.
- Gold Street, centre of Lovejoy Street, 6 inch R., 10 e. and 21/2 s. of hydrant.
- Gold Street, n. w. c. of Lovejoy Street, 6 inch R., 10 e. and 17 n. of hydrant.
- Gold Street, s. w. c. of Vanderbilt Street, 6 inch R., 9 e. and 10½ s. of hydrant.
- Gold Street, s. w. c. of Reiman Street, 6 inch R., 9 e. and 4-s. of hydrant.
- Grant Street, n. w. c. of Bouck Avenue, 6 inch H., 20½ e. and 27 s. of n. w. c.
- Grant Street, s. w. c. of Delavan Avenue, 6 inch H, 42 w. and $12\frac{1}{2}$ s. of hydrant.
- Gorton Street, s. w. c. of Hertel Avenue, 6 inch R., 32 n. and 22 e. of s. w. c.
- Georgia Street, s. e. c. of Prospect Avenue, 6 inch R., 29 n. and 19 w. of s. e. c.
- Howard Avenue, n. w. c. of Bryant Street, 6 inch H., 23 e. of n. w. c.
- Howard Avenue, s. w. c. of Utica Street, 6 inch H., 23 e. and $3\frac{1}{2}$ s. of s. w. c.

- Howard Avenue, n. w. c. of Utica Street, 6 inch H., 7½ e. and 65½ n. of hydrant.
- Howard Avenue, n. w. c. of Ferry Street, 6 inch H., 22 e. of n. w. c.
- Howard Avenue, n. w. c. of Auburn Avenue, 6 inch H., 22 e. of n. w. c.
- Howard Avenue, s. w. c. of Bouck Avenue, 6 inch H., 63 e. and 11 n. of hydrant.
- Hoyt Street, n. w. c. of Breckenridge Street, 6 inch H., 10½ e. and 3 s. of hydrant.
- Hoyt Street, n. w. c. of Bouck Avenue, 6 inch H., 24½ s. and 18 e. of n. w. c.
- Hoyt Street, n. w. c. of Delavan Avenue, 6 inch H., 22 e. of n. w. c.
- Hoyt Street, s. w. c. of Bird Avenue, 6 inch H., 9½ e. and 2 n. of hydrant.
- Hodge Avenue, s. e. c. of Ashland Avenue, 6 inch II., 9 n. and 29 w. of hydrant.
- Harwood Place, centre of Jefferson Street, 6 inch H., 38 w. and 14½ n. of s. e. c.
- Hibbard Street, n. w. c. of Ferry Street, 6 inch H., 31½ e. and 18 s. of n. w. c.
- Helen Street, s. e. c. of Dewitt Street, 6 inch H., 22 n. of s. e. c.
- Hickory Street, south of 10 inch pipe in Genesee Street, 4 inch R.. 23 w. and 23 n. of s. e. c.
- Herkimer Street, s. w. c. of Bird Avenue, 6 inch H., 24 e. of s. w. c

- Huron Street, center of Main Street, 4 inch H., 49 e. and 291/2 n. of s. w. c.
- Huron Street, s. e. c. of Pearl Street, 4 inch H., 20½ n. of s. e. c.
- Huron Street, n. e. c. of Prospect Avenue to drain the 36 inch pipe, 6 inch R., 39 direct south of hydrant.
- Huron Street, n. e. c. of Prospect avenue, 36 inch R., 43 s. and 6 w. of hydrant.
- Huron Street, n. w. c. of Pearl Street, 36 inch R., 33 s. and 5 w. of n. w. c.
- Huron Street, n. w. c. of Oak Street, 36 inch R., 16 s. of n. w. c.
- Huron Street, n. w. c. of Oak Street, to drain the 36 inch pipe. 6 inch R., 24 s. and 6 w. of n. w. c.
- Humboldt Parkway, n. w. c. of Utica Street, 6 inch H., 9 e. of n. w. c.
- Humboldt Parkway, n. w. c. of Glenwood Avenue, 6 inch H., 7 e. of n. w. c.
- Humboldt Parkway, n. w. c. of Winslow avenue. 6 inch H., 9 e. of n. w. c.
- Humboldt Parkway, n. w. c. of Woodland Avenue, 6 inch H., 9 e. of n. w. c.
- Humboldt Parkway, n. w. c. of Northampton Street, 6 inch H., 9 e. of n. w. c.
- Hertel Avenue, n. e. c. of East Street, 16 inch R., 21 s. and 2 e. of n. w. c.
- Hertel Avenue, center of street for Gurnsey Street, 6 inch R., $30\frac{1}{2}$ n. and $9\frac{1}{2}$ e. of s. w. c.
- Hertel Avenue, 6 inch to hydrant corner of Tonawanda Street, 6 inch R., 14 s. and 6 e. of n. w. c.

- Hayward Street, center of Perry Street, 6 inch R., 22½ n. and 21½ e. of s. w. c.
- Jefferson Alley, centre of Jefferson Street, 4 inch H., 32 e. and $32\frac{1}{2}$ n. of n. w. c. of Jefferson Street and Virginia St.
- Jefferson Street, 6 inch to hydrant s. e. c. of Landon Street, 6 inch H. 3 w. of hydrant.
- Jewett Avenue, n. w. c. of Summit Street, 6 inch H., 35 w. and 40 n. of n. w. c. of the church.
- Klaus Street, s. w. c. of Jones Street, 6 inch R., 18 n. and 3 e. of s. w. c.
- Kehr Street, n. w. c. of Genesee Street, 6 inch H., 21 c. of n. w. c.
- Kail Street, s. w. c. of Austin Street, 6 inch R., 20 e. of s. w. c. Kail Street, centre of Austin Street, for hydrant, 6 inch R., 20 e. and 30 n. of s. w. c.
- Landon Street, s. e. c. of Jefferson Street, 16 inch H., 20 n. and 17 e. of s. e. c.
- Landon Street, s. w. c. of Rohrer Avenue, 16 inch H., 24 n. of s. w. c.
- Landon Street, s. w. c. of Humboldt Parkway, 16 inch H., 25 n. of s. w. c.
- Landon Street, s. w. c. of Avenuc A., 16 inch H., 24 n. of s. w. c.
- Landon Street, s. w. c. of Dupont Street, 6 inch H., 18 n. and 15 e. of s. w. c.
- Landon Street, s. w. c. of Hauf Street, 6 inch H., 20 n. and 17 e. of s. w. c.
- Landon Street, s. w. c. of Rohrer Avenue, 6 inch H., 20 n. and 17 e. of s. w. c.

- Landon Street, s. w. c. of Woehlers Avenue, 6 inch H., 19 n. and 17 e. of s. w. c.
- Landon Street, 6 inch to hydrant s. w. c. of Humboldt Parkway, 6 inch H., 21 n. and 18 e. of s. w. c.
- Laurel Street, s. e. c. of Masten Street, 6 inch H., 75 e. and 9 n. of Hydrant s. w. c. of Masten Street.
- Lombard Street, s. w. c. of Peckham Street, 6 inch R., 18 e. and 2 s. of s. w. c.
- Lombard Street, s. w. c. of Lovejoy Street, 6 inch R., 18 e. and 3 s. of s. w. c.
- Loepere Street, center of Broadway, 6 inch R., 22 s. and 29 e. of n. w. c.
- Loepere Street, s. w. c. of Stanislaus Street, 6 inch R., I s. and 18½ e. of s. w. c.
- Loepere Street, s. w. c. of Sycamore Street, 6 inch R., 23 n. and 8 e. of hydrant.
- Linwood Avenue, south of 20-inch pipe in Delavan Avenue, 6 inch H., 22 n. and 40 e. of s. w. c.
- Mills Street, centre of Heacock Street, 4 inch R., 15 w. and 14½ n. of hydrant on s. e. c.
- Myrtle Avenue, n. w. c. of Chicago Street, 6 inch R., 16 n. of s. w. c.
- Myrtle Avenue, n. e. c. of Chicago Street, 6 inch R., 23 s. and 32 w. of n. e. c.
- Montgomery Street, n. w. c. of James Street, 4 inch R., 23 e. and 8 n. of hydrant on n. w. c.
- Michigan Street, south of 16 inch pipe in Delavan Avenue, 6 inch H., 13 n. and 22 e. of s. w. c.

- Massachusetts Street, n. e. c. of Seventh Street, 6 inch H., to drain the 36 inch pipe in the sewer, 30 s. of n. e. c.
- Nineteenth Street, n. e. c. of Massachusetts Street, 6 inch H., 18 w. and 1 n. of n. e. c.
- North Street, s. w. c. of Sherman Street, 6 inch H., 16 n. of s. w. c.
- North Street, s. e. c. of Johnson Street, 6 inch H., 15½ n. of s. e. c.
- North Central Avenue, centre of Broadway, 6 inch R., 6½ e. and 58 n. of hydrant on s. w. c.
- Norton Street, s. e. c. of Metcalfe Street, 6 inch R., 47 e. of hydrant.
- Otto Street, s. e. c. of Hayward Street, 4 inch R. 21 n. and 13 w. of s. e. c.
- Otto Street, s. w. c. of Alabama Street, 4 inch R., 8 w. and 71 s. of hydrant north of Perry Street.
- Pine Street, n. w. c. of Swan St., 16 inch R., 19 e. of n. w. c.
- Pine Street, s. w. c. of North Division Street, 16 inch R., 16 n. and 22 e. of s. w. c.
- Pine Street, n. w. c. of North Division Street, 10 inch R., 26 n. and 22 e. of s. w. c.
- Pine Street, s. w. c. of Eagle Street, 10 inch R., 39 n. and 25 e. of s. w. c.
- Pine Street, 6 inch to hydrant corner of South Division Street, 6 inch R., 12 n. and 14 e. of s. w. c.
- Pink Street, s. w. c. of Smith Street, 6 inch R., 13 n. and 11 e. of s. w. c.
- Penfield Street, n. e. c. of Niagara Street, 4 inch R., 21 s. and 3 e. of n. e. c.

- Perry Street, s. w. c. of Smith Street, 12 inch R., 17 n. and 22 e. of hydrant.
- Perry Street, s. e. c. of Smith Street, 10 inch R., 17 n. and 34 e. of hydrant.
- Purdy Street, s. w. c. of Glenwood Avenue, 6 inch H., 38 w. and 19 s. of hydrant.
- Purdy Street, n. w. c. of Glenwood Avenue, 6 inch H., 38 w. and 12 s. of hydrant.
- Purdy Street, n. w. c. of Woodland Avenue, 6 inch H., 7 e. and 57½ n. of hydrant.
- Pratt Street, south of 10-inch pipe in Genesee Street, 4 inch H., 27 e. and 23 n. of s. e. c.
- Prospect Avenue, n. e. c. of Massachusetts Street, valve to drain the 36-inch pipe in the sewer, 6 inch R., 32 s. and 23 w. of n. e. c.
- Prospect Avenue, n. w. c. of Vermont Street, 36 inch R., 16 s. and 15 e. of hydrant.
- Prospect Avenue, s. e. c. of Jersey Street, 36 inch R., 23 w. and 3 s. of hydrant.
- Prospect Avenue, s. c. c. of Jersey Street, to drain the 36-inch pipe in the sewer, 6 inch R., $36\frac{1}{2}$ n. and 14 w. of hydrant.
- Prospect Avenue, s. e. c. of Maryland Street, 6 inch R., 27 w. and 12 s. of s. e. c.
- Prospect Avenue, center of block between Maryland Street and Virginia Street, 36 inch R., 4 w. and 24½ s. of hydrant.
- Prospect Avenue, center of block between Maryland Street and Virginia Street, to drain the 36-inch pipe in the sewer 6 inch R., 13½ w. and 14½ s. of hydrant.

- Prospect Avenue, n. e. c. of Virginia Street, to drain 36-inch pipe in the sewer, 6 inch R., 27 w. and 34 s. of n. e. c.
- Prospect Avenue, n. e. c. of Carolina Street, 6 inch R., 14 w. and 2 n. of hydrant.
- Prospect Avenue, n. e. c. of Georgia Street, 6 inch R., 39 e. and 51 n. of hydrant.
- Prospect Avenue, s. e. c. of Georgia Street, 6 inch R., 39 e. and 1 s. of hydrant.
- Prospect Avenue, n. e. c. of Huron Street, to drain 36-inch pipe, 6 inch R., 39 w. and 19 n. of n. e. c.
- Riley Street, center of street at North Elm Street, 6 inch H., 9 e. and 20 n. of hydrant.
- Spring Street, centre of Genesee Street, 10 inch H., 30 w. and 33 n. of s. e. c.
- Spring Street, centre of Cherry Street, 10 inch H., 20 n. and 35 w. of s. e. c.
- Seventh Street, s. e. c. of Vermont Street, 20 inch R., 14 w. and 21 n. of hydrant. This valve is for the connection between 20 inch high service and 36 inch low service.
- Smith Street, s. c. c. of St. Stephen Street, 6 inch R., 111/2 w. and 5 s. of hydrant on s. e. c.
- Smith Street, centre of Abbott Road, 10 inch R., 30 n. and 11½ w. of hydrant on s. e. c.
- Sixteenth Street, centre of Massachusetts Street, 6 inch H., 21 e. and 30 s. of n. w. c.
- Sixteenth Street, s. w. c. of Hampshire Street, 6 inch H., 40 w. and 7 n. of s. e. c.
- Sycamore Street, s. w. c. of Bowen Street, 20 inch R., 23 n. of s. w. c.

- Sycamore Street, s. w. c. of Rother Street, 20 inch R., 24 n. of s. w. c.
- Sycamore Street, s. w. c. of Mills Street, 6 inch R., 22 n. and 11 e. of hydrant.
- Sycamore Street, s. w. c. of Sobiesky Street, 6 inch R., 25 n. and 9 e. of hydrant.
- Sycamore Street, s. w. c. of Lathrop Street, 6 inch R., 19 n. and 9 e. of hydrant.
- Scott Street, s. e. c. of Van Rensselaer Street, 4 inch R., 3½ w. and 18 n. of hydrant.
- Strauss Street, n. e. c. of Sycamore Street, 6 inch R., 11 w. and 1½ s. of hydrant.
- Seneca Street, s. e. c. of Chicago Street, 12 inch R., 26 n. and 22 w. of s. e. c.
- Swan Street, s. w. c. of Chicago Street, 10 inch R., 43 w. and 29 n. of s. e. c.
- South Division Street, s. w. c. of Pine Street, 4 inch R., 26 n. and 13 e. of s. w. c.
- Tennessee Street, s. e. c. of Mackinaw Street, 6 inch R., 21 w. of s. e. c.
- Thomas Street, n. e. c. of Metcalfe Street, 6 inch R., $8\frac{1}{2}$ w. and $37\frac{1}{2}$ e. of n. e. c.
- Tryon Place, n. e. c. of Bouck Avenue, 6 inch H., 26 s. and 35 w. of n. e. c.
- Urban Street, 6 inch west of 16 inch pipe in Avenue A, 6 inch H., 25 n. and 21 e. of s. w. c.
- Urban Street, 6 inch east of 16 inch pipe in Avenue A, 6 inch H., 25 n. and 27 e. of s. w. c.

- Utica Street, s. e. c. of Brooklyn Street, 6 inch H., 26 s. and 38½ e. of lamp post on n. w. c.
- Utica Street, s. e. c. of Roehrer Avenue, 6 inch H., 8 n. and 50 e. of hydrant on s. w. c.
- Utica Street. s. e. c. of Duckrotz Street, 6 inch H., 41 w. and 9 n. of lamp post on s. w. c.
- Utica Street, s. w. c. of Humboldt Parkway, 6 inch H., 26½ n. of s. w. c.
- Utica Street, n. e. c. of Richmond Avenue, 4 inch H., 16 w. and 13 s. of n. e. c.
- Utica Street, s. w. c. of Avenue A, 6 inch H., 9 n. and 17 e. of s. w. c.
- Vine Street, s. w. c. of Elm Street, 3 inch R., 15 n. and 5 w. of s. w. c.
- Vine Street, centre of Oak Street, 3 inch R., 38 w. and 17 1/2 s. of n. e. c.
- Vandalia Street, s. w. c. of Mackinaw Street, 6 inch R., 371/2 e. and 161/2 n. of s. w. c.
- Virginia Street, n. w. c. of Fifth Street, 6 inch R., 39 n. and 2 e. of hydrant.
- Waverly Street, n. w. c. of Glenwood Avenue, 6 inch H., 15½ e. and 2½ n. of n. w. c.
- William Street, center of Pratt Street, 10 inch R., 30 s. and 15 e. of n. w. c.
- William Street, center of Jefferson Street, 10 inch R., 28 n. and 10 w. of s. w. c.
- William Street, s. w. c. of Pratt Street, 4 inch R., 35 s. and 21 1/2 e. of n. w. c.

- William Street, east of South Ogden Street, 4 inch R., 316 1 and 59 e. of n. e. c. of the butment of the railroad bridge
- Winslow Avenue, s. w. c. of Avenue A., 6 inch H., 8 n. and e. of hydrant.
- Winslow Avenue, center of Broadway, 6 inch R., 47 s. and a e. of n. w. c.
- Winslow Avenue, center of Broadway, 6 inch R., 38 s. and 29 e. of n. w. c.
- Woeppel Avenue, s. w. c. of Avenue A., 6 inch H., 9 n. and 21 e. of hydrant.
- Winter Street, n. w. c. of Massachusetts Street, 6 inch H., 44 direct north of hydrant.
- Winter Street, s. w. c. of Hampshire Street, 6 inch H., 18 eand 2 s. of s. w. c.
- Woehlers Avenue, center of Dodge Street, 6 inch H., 23 1/2 e. and 16 1/4 n. of hydrant.
- Woehlers Avenue, s. w. c. of Northampton Street, 6 inch H., 7 e. and 3 s. of hydrant.
- Welker Street, n. w. c. of Glenwood Avenue, 6 inch H., 8 eand 32½ n. of hydrant.
- Welker Street, n. w. c. of Woodlawn Avenue, 6 inch H., 7 e. and 59½ n. of hydrant.
- Washington Street, south of the Genesee Street pipe, 12 inch H., 48 w. and 50 n. of s. e. c.
- Walnut Street, south of the Genesee Street pipe, 6 inch R., 39 e. and 18 n. of s. w. c.

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PUMPING DEPARTMENT, 1888.

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PUMPING DEPARTMENT.

PUMPING ENGINES, AND THEIR CAPACITY PER 24 HOURS.

I. Lower House.

Engine	e No	. 1,	Worth	ing	ton	, .					10,000,000	gallons.
44	**	2,									15,000,000	4.
**		3.									15,000,000	**
44	44										15,000,000	**
											20,000,000	44
Engine	· No	. 6,	IN CO Gaskill	, .		•	•	•	•	•	20,000,000	gallons.
Engine	No	,									6,000,000 ş	rallone
_			-								•	
											545,365,450	44
44	"		1887,							14,	033,297,522	**

DAILY SUPPLY.

Increase, 1888, 1,512,067,928

The average daily supply for the year 1888 was forty-two million five hundred and ninety thousand one hundred and forty-two gallons, an increase of four million one hundred and five thousand one hundred and six gallons over the previous year.

164 TWENTIETH ANNUAL REPORT.

On the following days, the greatest and least amounts we pumped:

GREATEST AMOUNTS PUMPED.

Thursday, February 9th,				58,549,920 gallon
Friday, February 10th,				59,665,960 "
Tuesday, March 6th, .				59,013,360 "

LEAST AMOUNT PUMPED.

Sunday, April 22d,					34,962,380	44
Sunday, May 6th,					32,109,680	"
Sunday, May 13th,					32,018,140	"

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	1111	DOPPALO CITT WATER WORKS. 173
	Location of Pipe.	33 ft. s. of n. line. 25 ft. n. of s. line. 23 ft. n. of s. line. 19 ft. e. of w. line. 19 ft. e. of w. line. 14 ft. e. of w. line. 15 ft. w. of e. line. 14 ft. e. of w. line. 15 ft. w. of e. line. 23 ft. s. of n. line. 23 ft. s. of n. line. 25 ft. n. of s. line. 25 ft. n. of s. line. 25 ft. n. of s. line. 25 ft. w. of e. line. 25 ft. n. of s. line. 26 ft. n. of s. line. 27 ft. n. of s. line. 28 ft. e. of w. line. 29 ft. w. of e. line. 25 ft. n. of s. line. 25 ft. n. of s. line. 26 ft. n. of s. line. 27 ft. n. of s. line. 28 ft. of w. line. 29 ft. n. of s. line. 25 ft. n. of s. line. 26 ft. n. of s. line. 27 ft. n. of s. line.
	System.	#%%%%%%%%%%###########################
	Size of Pipe, Inches.	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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EASI	From	Fillmore avenue. Smith. Smith. Fagle. Clinton. William. Brown. Senera. Mackinaw Herry. Perry. Perry. Conesee. Fillmore avenue Fillmore avenue William. Light. William. Light. William. Ludington. High. Main. Jefferson.
	Street.	A Abbott road Abbott road Adams. Adams. Adams. Adams. Adams. Adabama Alabama Alabama Alabama Alabama Alabama Alabama Alabama Alabama Alabama Baboock

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Carroll	200 feet west of Chicago	160 feet west of Chicago	X	_	f.	of s. line	
Carroll	Chicago	Louisiana	· ``c	: ≃	=	f n line	
Carroll	Louisiana		7	:≃	. 5	f n. line	
Carroll.	Heacock	400 ft. e. of Van Rensselaer	4	×	f. s	f n. line	
Carroll	II ydraulic	Reservation line	7	 ∡	ft. s	f n. line	
Carroll	Heacock.	Jefferson	7	~	£ s	f n. line	_
Cayuga	Jefferson	Grey	9	I	ff.	of s. line	
Cedar	Swan	Broadway	ç	~	بد	of e. line	
Central avenue	William.	Lovejoy	9	~	<u>ت</u>	of e. line	
Center	Seneca	Swan	4	24	نځ	of e. line	
Cherry	Michigan	Virginia	20	<u>۔</u> ح	بر	of s. line	
Chester	Glenwood avenue	Puffer	9	- H	يخ	of e. Jine	
Chicago	Seneca	roo feet northerly	1,4	8	F .	f w. line	
Chicago	Exchange	Swan	91	×	آ .	of e. line	
Chicago	Exchange	Ohio	 91	×	ff. e	f w. line	
Chippewa	Main	Ellicott.	9	Ξ	ff.	of s line	
Clark.		Curtiss	9	عد	ft.e	f w. line	
Clemo		500 feet northerly	9	 K	f.e	f w. line	
Clifford		Selkirk	9	 ∡	يو	of s. line	
Clinton		Madison	30	 ¥	f.	of n. line.	
Clinton	Washington	Oak	9	H	f. S	of n. line	
Clinton	Oak	Union	9	×	ft. s	f n. line	
Clinton	Union	Emslie	01	~	£.	of n. line	
Clinton	Emslie	Babcock	9	~	ff. n	of s. line	
Clinton	Babcock	Williamsville road	91	~	ff. n	of s. line	
Coit	Howard	Broadway	9	≃.	ff. e.	f w. line	
Columbia	Perry	Elk	9	×	f. K	of e. line	
Columbia	Ohio	Buttalo river	91	×	ff. ¥	of e. line	
(`ooper	Main	Belt Line	 ص	Ξ	ft. n	of s. line	
Cypress	Michigan	Pine	9	×	ft. s.	f n. line	
Davey	Ludington	Lovejoy	9	 ≃	£. ₩	of e. line	
Davis.	Genesee	[efferson		۳ 	26 ft. w. c	of e. line	
•		01 11 12 12 12 12 12 12 12 12 12 12 12 12	- 、	~ :		S ine	
	William	North line of lot 58	۰.	4 6	¥	e ine	
	Isroadway	I, Ioo feet southerly	_ • •	¥:	37 It. w. 0	of e. line	
Detroit	William	Broadway	٥	- E	18 II. e. o	w IIDe	

System.
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Street.	From	ę.	Size of Pipe, Inches.	System.	Location of Pipe.
		1	ı		
Best.	Fox	Genesee	œ	Ξ	23 ft. n. of s. line.
Blossom alley	Huron.	Broadway	7	~	15 ft. e. of w. line.
Bond.	Clinton	Howard	4	×	18 ft. w. of e. line.
Boston allev	Tupper	Virginia	7	I	7 ft. e. of w. line.
Bowen	Broadway	Sycamore	၁	×	29 ft. e. of w. line.
Bowen	Walden avenue.	Sycamore	င	Ξ	l 24 ft. e. of w. line.
Bristol	Spring	Jefferson	•	×	37 ft. s. of n. line.
Bristol	Emslic	Lord	7	~	44 ft. s. of n. line.
Bristol	Smith.	Raze	9	×	37 ft. s. of n. line.
Broadway	Layfayette	Ellicott	၁	×	50 ft. s. of n. line.
Broadway	Ellicott	Pratt.	91	×	s. of n.
Broadway	Pratt	Fillmore avenue	01	~	of n.
		# · · · · · · · · · · · · · · · · · · ·		=	s. of n.
Broadway	Sherman	Smith.	7	4:	
Broadway	Fillmore avenue	Bailey avenue.	2	× :	s.
Broadway	Bailey avenue	N. Y. C. K. K.	2	× :	57 ft. n. of s. line.
Brown	Adams	Jefferson.	2	¥∶	20 ft. n. of s. line.
Bundy alley	Sycamore	350 feet northerly	+	⊻:	12 ft. w. of e. line.
Burton alley	Ellicott	Boston alley	+	= :	11 ft. s. of n. line.
Burton alley	Kalph alley	Michigan	→	=	16 ft. n. of s. line.
Burwell place	Scott	Perry	7	×	23 ft. e. of w. line.
C	Fillmore avenue	Mill	9	%	33 ft. n. of s. line.
Camp	Genesee	Sycamore	၁	×	30 ft. w. of e. line.
Carlton	Main	Mulberry	9	I :	23 ft. s. of n. line.
Carlton	Mulberry.	I.emon.	.	Ξ	24 ft. s. of n. line.
Carlton	I.cmon	Genesee	င	=	23 ft. s. of n line.
Carroll	Washington	Michigan	၁	≃.	33 ft. n. of s. line.
Carroll	Michigan	200 feet west of Chicago	4	~	33 ft. n. of s. line.

Carroll	200 feet west of Chicago	160 feet west of Chicago	7,9	- XX:	ft. n. of s. line.
Carroll	Louisiana	Alabama	寸 <	자 18 2	ے نے
Carroll	Hydraulic	Reservation line.	r +	* * * * * * * * * * * * * * * * * * *	ft. s. of n. l
Carroll	Heacock	Jefferson	-	R 32	ft s. of n.
Cayuga	Jefferson	Grey	9		ft. n. of s.
Cedar	Swan	Broadway	ç	ጽ	ft w. of e.
Central avenue	William	Lovejoy	9		ft. w. of e.
Center	Seneca	Swan	4	R 17	ft. w. of e.
Cherry	Michigan	Virginia	20		ft. n. of s.
Chester	Glenwood avenue	Puffer	9	H 3	ft. w. of e.
Chicago	Seneca	too feet northerly	1,7	R 1.	ft. e. of w.
Chicago	Exchange	Swan	91	R 26	ft, w. of e.
Chicago	Exchange	Ohio	91	∓ ≃	ft. e. of w.
Chippewa	Main	Ellicott.	9]] 2(ft. n. of s
Clark.	Lovejoy.	Curtiss	9	χ Ξ	ft. e. of w.
Clemo	Clinton	500 feet northerly	9	×	ft. e. of w.
Clifford	Smith	Selkirk	9	χ 2	ft n. of s.
Clinton	Main	Madison	36	κ 2	ft. s. of n.
Clinton	Washington	Oak	9	II : 43	
Clinton	Oak	Union	9	¥ ¥	ft. s. of n.
Clinton	Union	Emslie	01	~	ft. s. of n.
Clinton	Emslie	Babcock	9	× 2.	ft. n. of s.
Clinton	Babcock	Williamsville road	91	λ 22	ft. n. of s.
Coit	Howard	Broadway	9,	æ ≃:	ft. e. of w.
Columbia	Perry	Elk	9	7 7	ft. w. of e.
Columbia	Ohio	Buffalo river	9	∡ :	ft. w. of e.
Cooper	Main	Belt Line	۔ ص	11	ft. n. of s.
Cypress	Michigan	Pine	9	×	ft. s. of n.
Davey	Ludington	Lovejoy	9	R 4.	ft. w. of
Davis	Genesee	lefferson	-1	R . 26	ft. w. of
	William	North line of lot 18		-	orr. n. of s. line.
Deple	Broadway	T too feet southerly	.	 	5 G
Detroit	William	Broadway	•	181 181	It. e. of w line.
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Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

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erly. 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10	erly. 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10	erly. 6 HH herly. 10 H H therly. 6 H H 6 H	erly. 6 H H H H H H H H H H H H H H H H H H	erly. 6 R R herly. 10 R H therly. 4 H R R R R R R R R R R R R R R R R R R	asterly 10 R ortherly 6 R 10 R ortherly 10 H 10	ortherly 6 R ortherly 10 R outherly 4 H coutherly 4 R 6 H
erly. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	erly. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	erly. 6 H H herly. 10 H H therly. 10 H H 6 H 6 H 6 H 6 H 6 H 6 H 6 H 6 H 6	erly. 6 H H herly. 10 H H H H H H H H H H H H H H H H H H	triy. 6 RR R R R R R R R R R R R R R R R R R	asterly 10 R outherly 4 H outherly 6 R outherly 6 H 6 H	ortherly 6 R ortherly 10 R outherly 4 H coutherly 4 R 6 H 6 H
erly. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	erly. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	erly. 6	erly. 6 H H therly. 10 H K H therly. 10 H H therly. 10 H H therly. 10 H K M M M M M M M M M M M M M M M M M M	therly. the	asterly 0 R C R Ortherly 10 R C C R C C C C C C C C C C C C C C C	ortherly 6 R ortherly 10 R outherly 10 H outherly 6 H f 6 H tton 6 H

Ellicott	Broadway	Genesee	- OI	26 ft. c. of w. line.
Elm	() enesee	Tunner	2	ودها
Elm	Tupper	High		40 ft. w. of e. line.
Elm	North	Best	9	ft, e. of w.
Elm.	Swan	Genesee	10 K	ft. c of w. l
Elmslie	Seneca	Broadway	<u>ح</u> د	ft. e. of w.
Euclid place	Elk	Prenatt	≃ →	ft e. of w.
Euclid place		Abbott road	<u>ئ</u>	ft. e of w.
Exchange		Jefferson.	20 K	ft. n. of s.
Exchange.	un	Michigan.	9	32 ft. n. of s line.
Exchange		Heacock	12 1	ft. n. of s.
Exchange		Heacock	<u>ح</u>	ft. s. of n.
Exchange.		Washington	12	ft. n. of s.
Exchange	Heacock	Smith	12 F	ft. s. of n.
Exchange		Selkirk	9	ft. n. of s.
Ferry		600 ft. e. Jefferson	12 I	ft. s. of n.
Fillmore avenue		Peckham	16 F	ft. e. of w.
Fillmore avenue		Broadway	16 k	ft. e. of w.
Fillmore avenue		Sycamore	16 I	ft. w. of e.
Fillmore avenue	Sycamore	Broadway	9	ft. w. of e.
Fillmore avenue		C	9	ft. w. of e.
Fitzgerald		Sandusky	<u>بر</u> د	ft. w. of e
Florida		600 feet easterly	-	15 ft. n. of s.
Folsom	Michigan	Chicago	<u>ح</u> ج	25 ft. s. of n.
Folsom	Chicago	South Cedar	4	14 ft. n. of s.
Folsom	South Cedar	Jefferson	ر - ج	14 ft. n. of s.
Fougeron avenue	Avenue A	Belt Line.	 	33
Fox	('enesee''	Sycamore	o Y	40 ft. e. of w.
Fox	Genesee	North	× •	28
Fox	Broadway	Sycamore	ж 9	39 ft. e. of w.
Fulton	Michigan	Louisiana	ж 9	36 ft. s. of n.
Fulton	Hamburgh	L. S. & M. S. R. R	≃ .0	24 ft. n. of s.
Fulton	Van Rensselaer	Frie Railway	<u>بر</u> ت	27 ft. n of s.
Fulton	Louisiana	Hamburgh	<u>≃</u> د	5
Fulton	Smith	Railroad	9	20 ft. n. of s. line.
Ganson	South Michigan	320 feet northerly	- Y	, 7 ft. w. of e. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	Ę.	Size of Pipe, Inches.	System.	Location of Pipe.
(janson	South Michigan	T The feet southerly	- 91	. 2	10 ft w of a line
Canson	320 north of S. Michigan.	640 feet northerly	2 2	. ×	7 ft. w. of e. line.
Garfield	Ludington.	Lovejoy.	9	~	41 ft. w. of e. line
(Jay	Michigan	Potter	↔	2	26 ft. s. of n. line.
Genesee	Main	Oak	01	Ή	6t ft. s. of n. line.
Genesee	Michigan	Jefferson	01	H	39 ft. s. of n. line.
(jenesee	Jefferson	Best	10	Ξ	
(Jenesee	Best	Bailey avenue	01	Ξ	s. of n.
Genesee	Michigan	Oak	01	-	
George	Mortimer	Jefferson	4		12 ft. n. of s. line.
Gerhardt	Dodge	Northampton	•		22 ft. e. of w. line.
German alley	Sycamore	Genesee.	4		15 ft. e. of w. line.
Cibson	Curtis.	Lovejoy.	<u>ح</u>		
Girard place	Humboldt parkway	Avenue A	9	H	ft. n. of s.
Glenwood avenue	Main	Purdy	9	H	37 ft. n. of s. line.
Glenwood avenue	Purdy	Walker	ی	Ξ	
Gold	William	Broadway	9	~	41 ft. w. of e. line.
Goodell	Main	Michigan	12	Ξ	40 ft. s. of n. line.
Goodell	Michigan	Cherry	2	24	26 ft. n. of s. line.
Goodell alley	Tupper	Goodell	4	Η	7 ft. e. of w. line.
Goodrich	Main	Michigan	۰	Ξ	40 ft. n. of s. line.
Goodyear avenue	Broadway	350 feet northerly	۰	~	19 ft. e. of w. line.
Gorham	Elk	Репту	9	2	33 ft. w. of e. line.
Granger	Chicago	Ohio Basin Slip	 च	~	24 ft. s. of n. line.
(irape	Cherry	Virginia	•	~	38 ft. w. of e. line.
()rape	High	Best	9	Ξ	39 ft. w. of e. line.
(jrape	Virginia	Carlton	စ	×	25 ft. w. of e. line.
Grape	Carlton	High	9	Ξ	44 ft. e. of w. line.

(ireen	Michigan	Beak	~	30 ft. n. of s. line.
Grey	Broadway	Genesee	ع ح	28 ft. w. of e. line.
(rey	Carlton	High	9 9	18 ft. e. of w. line.
Guilford	Broadway	Sycamore		34 ft. w. of e. line.
(inilford	Best	Genesee		18 ft. e. of w. line.
Hamburgh	Elk	Fulton		23 ft. w. of e. line.
Hamburgh	Exchange	Elk	-	25 ft. w. of e. line.
Hamburgh	Elk	South	Io R	23 ft. w. of e. line.
Harlow place	Purdy	Alexander place	-	22 ft. n. of s. line.
Harwood place	Jefferson	End of street		14 ft. n. of s. line.
Hayward	Elk	Fulton.	-	23 ft. e. of w. line.
Hayward	Perry	250 feet northerly	9	18 ft. w. of e. line.
Hayward	Fulton	Perry	⊻ 9	48 ft. w. of e. line.
Heacock	Seneca	Scott	≃ →	20 ft. e. of w. line.
Heacock	Exchange	Репту		18 ft. w. of e. line.
Herman	Broadway	North	9 8	30 ft. w. of e line.
Herman	North	Best	9 9	18 ft. e. of w. line.
Hickory	Cherry	Genesee	10 K	23 ft. e. of w. line.
Hickory	(ienesee	Eagle	ە بە	to ft. w. of e. line.
High	Main	Jefferson	II OI	28 ft s. of n. line.
High	Jefferson	Grey	H 9	37 ft. n. of s. line.
	Spring	Mortimer	*	34 ft. s. of n. line.
• • • • • • • • • • • • • • • • • • • •	Spring	Mortimer	بر م	16 ft. s. of n. line.
Howard.	Jefferson	Madison	9	20 ft. s. of n. line.
Howard	Monroe	Adams	۲ 9	15 ft. n. of s. line.
Howard	Madison	Monroe	≭	16 ft. n. of s. line
Howard	Adams	Sherman street	*	37 ft. s. of n. line.
Howard	Madison	Metcalfe	36 R	20 ft. s of n. line.
Howard	Sherman	Shumway	9	39 ft. s. of n. line.
	Smith	Raze	±.	16 ft. n. of s. line.
	Shumway	Smith	≃ : →	36 ft. s. of n. line.
	Metcalfe	Babcock	21 	39 ft. s. of n. line.
Howholdt and	Metcalfe	Stetson	4 5	33 ft. s. of n. line.
Humboldt parkway	Vorthampton	Kingslev	12	To fe a of we line
	Washington	Oak	. 4 	26 ft. n. of s. line.

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Street.	From	ţ	Size of Pipe, Inches.	System. —	Location of Pipe.
Huron	Vain)ak	. — 92		18 ft s of n line
Hydraulic	Seneca	Carroll	- 3 -	<u> </u>	25 ft. w. of e. line.
Illinois	Elk	Perry	• •		17 ft. w. of e. line.
Illinois.	Scott	Perry	ပ		32 ft. w. of e. line.
Indiana	Perry	Mary	7		17 ft. w. of e. line.
Indiana	Mary	Ohio	9		17 ft. w. of e. line.
James	Lord	Montgomery	9		14 ft s. of n. line.
James	Montgomery	Fillmore avenue	7		12 ft. s of n. line.
Jefferson	Exchange	William	20		21 ft. e of w. line.
Jefferson	William	100 feet north of George	၁		38 ft. w. of e. line.
[efferson	ico feet north of George	Sycamore	4		18 ft. e. of w. line.
Jefferson	too feet north of George	400 feet north of George	61		18 ft. w. of e. line.
Tefferson	Sycamore	Davis	+		18 ft. e. of w. line.
Jefferson, c. sidewalk.	Sycamore	Davis	4		18 ft. w. of e. line.
Jefferson	Davis	Brown	9		35 ft. w of e. line.
leffersom	Brown.	Virginia	20		30 ft. e. of w. line.
lefferson	Virginia.	High	9	=	30 ft. e. of w. line.
Jefferson.	High	Best	01	=	28 ft. w. of e line.
[efferson	Best.	Ferry	91	= :	43 ft. w of e. line.
Jefferson	Ferry	Puffer	91	Ξ:	37 ft. w. of e. line.
[efferson	Puffer	Main	91	-	40 ft. w. of e. line.
Jefferson alley	Jefferson	End of alley	e		15 ft. s. of n. line.
Jerry	Kaze	Fillmore avenue	4		21 ft. n. of s. line.
Johnson	North.	Best	9	Ξ	30 ft. w. of e. line.
Johnson	Broadway	North	ç		45 ft. w. of e. line.
Jones	Lyman	Norton	9		39 ft. w. of e. line
	representation and accommonly	tos foot northerly.	•		8 ft. e. of w. line.
Malle		4.5 rece morniem j	+		8 ft. w. of e. line.

Kane	(renesee	125 feet southerly	۔ ح	×	to ft. e. of w. line.
Katherine	Elk	Frie Railway	ي د	· ~	ft p . f
Kehr	Genesee	Fougeron		:=	17 ft. e. of w. line.
Kentucky	St. Clair	Ottawa	9	~	ft. e. of w.
Ketchum alley	Carlton	High	4	Ξ	ft. w. of e.
Kingsley	Jefferson	Rohrer	9	Ξ	18 ft. n. of s. line.
Klaus	Metcalfe.	Jones	9	~	ft. n of s
Kosciuszko	Broadway	Stanislaus	9	~	ft.e of w
Krettner	Howard	150 feet north of Lovejoy	9	~	ft. w. of e.
Krettner	Broadway	Lovejoy	Ç	~	15 ft. e. of w line.
Lafayette	Washington	Broadway	9	×	ft. s. of n.
Landon.	Jefferson	Avenue A	91	Ξ	ft. s. of n
Laurel	Jefferson	Masten	၁	Η	ft. s. of n.
Lemon	Cherry	North	9	Ξ	ft. e. of w.
Lester	Seneca	soo feet northerly	ç	×	ft w. of e
Lewis.	William	Howard	9	~	ft.e of w.
Lewis	Clinton	Norton	9	ĸ	ft. w. of e.
Laurel	Michigan	Masten	9	Η	ft. s. of n.
Locust	Cherry	North	၁	I	ft. e. of w.
Loepere	Broadway	Sycamore	9	×	ft. e. of w.
Lombard	Curtis	Lovejoy.	9	×	ft. e. of w.
Lord	Clinton	Eagle	ç	×	ft. w. of e.
Lord	South Division	270 feet southerly	9	×	ft w. of e.
Louisiana	Seneca	Hamburgh canal	9	×	ft. w. of e
Louisiana	Across Hamburgh canal		91	×	ft. w. of e.
Lovejoy	Emslie	Fillmore avenue	9	~	ft. s. of n.
Lovejoy	Central avenue	Bailey avenue	9	~	ft. n. of s.
Lovejoy	Fillmore avenue.	Sears	_ •	×	20 ft. n. of s. line.
Lovejoy.	Williamsville road	City line	01	~	ft. s. of n.
Ludington	Garfield	City line	9	~	ft. s. of n.
Lutheran alley	Broadway	William	+	~	ft. e. of w.
Lyman	Metcalfe	Jones	9	~	ft. s. of n.
Mackinaw	Fitzgerald	Railroad	۰	≃.	ft. s. of n.
Mackinaw	Louisiana	Hamburgh	၁	×	ft. n. of s.
Mackinaw	Sidway	Fitzgerald	ပ	≃	24 ft. s. of n. line.
Madison	Eagle	Brown	— 9	_ ≃	21 ft. w. of e. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Nireet.	From	ţ	Size of Pipe, stem.	Location of Pipe.
		:	- 1	
Madison	Clinton	Howard	36 R	31 ft. e. of w. line.
Main	Obio	Prime	ፈ : - 9	50 ft. w. of e. line.
Main	Prime	Exchange	ان ا	49 ft. w. of e. line.
Main	Exchange	North Division	12 II	49 ft. w. of e. line.
Main	North Division	Goodell	12 H	48 ft. w. of e line.
Main	Goodell	Allen	16 H	
Nain	.VIlen	Ferry	20 H	k of e.
Main	North	High	12 H	74 ft e of w line.
Main	Ferry	South line of Poorhouse lot.	H 91	ft. w ⇔fe.
Maple	Cherry	Virginia	9	ft. w. of e
Maple	Virginia	North	H 9	28 ft. e. of w line.
Mark	William	Gay	4	24 ft. w. of e. line.
Marvin	Elk	Perry	9	22 ft. w of e. line.
Masten.	Best.	Dodge	9	14 ft. e of w. line.
Masten	Dodge	Puffer	9	42 ft. w. of e. line.
Matthews alley	Jefferson.	Mortimer	4 X	12 ft. n. of s. line.
Maurice	Seneca	Elk.	6 R	20 ft. e. of w. line.
Maurice	Elk	Prenatt		17 ft. c. of w. line.
Metcalfe	Howard.	William.		18 ft. e. of w. line.
Metcalic	Howard	William	9	33 ft. w. of e line
Metcalfe	Howard	Norton	۰ ج	19 ft. e. of w. line
Meyer	Genesee	Best	_	17 ft. e of w. line.
Miami	Louisiana	Hamburgh	9	18 ft. s. of n. line.
Miami	Ohio	Chicago	16 R	33 ft. s. of n. line.
Michigan	Ohio	(renesee	10 R	28 ft. w. of e line.
Michigan	(jenesee	Goodell	12 K	24 ft. e. of w. line.
Michigan	120 feet north of Goddell	High	9	27 ft. e. of w. line.
Michigan	High	Best	10 H	32 ft e of w. line.

6 H 42 ft. w. of s. 6 K 30 ft. w. of e. 6 K 30 ft. w. of e. 6 K 32 ft. n. of s. 6 K 19 ft. w. of e. 7 K 19	6 R 19 ft. w. of e. 6 R 31 ft. n. of s. 6 R 31 ft. n. of s. 6 R 34 ft. w. of e. 6 R 16 ft. w. of e. 6 R 16 ft. w. of e. 6 R 18 ft. e. of w. e. 6 R 18 ft. e. of w. e. 6 R 18 ft. e. of w. e.	Lack. R. R. 2 R 7 ft. w. of e R 32 ft.		10 H 34 ft. s. of n. of n. of s. of n. of
Best Ferry Il eacock Railway Broadway William Smith Selkirk Colio Elk Mary Mary Perry	g	James		
Michigan Millor Minton Minton Mississippi Mississippi Mississippi	Mississippi Mohawk Mohr Monroe Monroe Montgomery	Montgomery Moore Mortimer Mortimer Mulberry Mulberry Nichols alley	North	Northampton Northampton North Central avenue North Division North Division

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

	From	T	Size of Pipe, Inches.	System.	Location of Pipe.
North Ogden	Lovejoy	William	01	~	35 ft. e. of w. line.
Norton	Lewis	500 feet easterly	 ي	~	38 ft. s. of n. iine.
Norton	Metcalfe	[ones	9	×	17 ft. n. of s. line
	Broadway	Sycamore	9	≃:	23 ft e of w. line.
	Canacaa	Tupper	4	¥ ;	10 ft. e. of w. line
)ak	Tupper	Goodell	2 0	¥	13 ft. w. of e. line.
)ak	Goodell	Virginia	· - ;	=	25 ft e of w. line
Oak	Virginia	High	ပ	Ξ	29 ft. e of w. line
Dak	North	Best	9	=	15 ft. w. of e. line
Okio	Swan.	Broadway	2	≃,	26 ft. e. of w. line
70000	Main	•	•	≃:	43 ft s. of n. line
Dhio	Mismi	Soo feet south of Chicago	•	% :	40 ft. n. of s line
hio	Lonisiana	Tor foot northerlin	2	٤:	33 ft. n. of s. line
)neida	Emslie	Smith	2 v	z 2	37 It e of w. line
Oneida	Central Railroad	Fillmore avenue	 o •c	د 2	11 ft s of n line
range	Cherry	High	9	Ξ	25 ft. e. of w line
range	High	North	9	Η	22 ft. e. of w. line
rlando	Seneca	Lehigh Val. R. R.	9	×	17 ft. e. of w. line
Orlando	Elk	350 feet southerly.	4	~	18 ft e. of w. line.
7.00 111	Hayward	Alabama	~	ĸ	16 ft. n. of s. line
Fabouy	Elk	Seneca	9	~	16 ft. e of w. line.
Cach	Cherry	Carlton	9	~	39 ft. w. of e. line.
r cach	Carlton	High	9	Ξ	27 ft. e. of w line
reach	North	Best	9	Ξ	34 ft. w of e. line.
Sockham	right	North	9	=	40 ft. e. of w. line
	lenerson	Filmore avenue	9	~	33 ft. n. of s. line

Perry	Main	Mississippi	¥ 9	45 ft. n of s. line.
Perry	Columbia	Michigan		12 ft. s. of n. curb.
Perry	Marvin	Heacock	-	29 ft. n. of s. line.
Perry	Heacock	Erie Railway		23 ft s. of n. line.
Perry	Smith	Selkirk		24 ft. s. of n. line.
Perry	Smith	300 feet westerly	12 K	24 ft. s. of n. line
Perry	Gorham	Winona		21 ft. n of s. line.
Pine	Eagle	William		20 ft w. of e. line
Pine.	William	Sycamore		26 ft. w. of e. line.
Pine	Eagle	North Division		21 ft. e. of w. line.
Pine	North Division	Swan	16 K	21 ft. e. of w. line.
Pink	Lord	Montgomery	-	to ft n. of s. line.
Porter	Van Kensselaer.	Hydraulic	9	32 ft. s. of n. line.
Porter	Van Kensseluer	Heacock	۲ د	33 ft. n. of s. line.
Potter	William	Broadway	¥ 9	18 ft. e. of w line
Pratt	Clinton	William	∵	37 ft. w. of e. line
Pratt	Eagle	Clinton	о Ж	25 ft. e. of w. line.
Pratt	William	Genesee	9	27 ft. e. of w. line.
Prenatt		Smith	9	34 ft n. of s. line.
Puffer	•	Jefferson	9	38 ft. s. of n. line.
Purdy		End of street	9	18 ft. e. of w. line.
Ralph alley.	lley	Virginia	=	16 ft e. of w. line
• • • • • • • • • • • • • • • • • • • •		2. o feet southerly	1 1.5 R	15 ft w. of e. line.
		James	ع ع	36 ft. w. of e. line.
	Clinton	Bristol	ە 3	33 ft. w. of e. line.
		Jerry	ي د د	33 ft. w. of e. line.
		Fulton	0 R	t ft. e. of w. line.
	• • • • • • • • • • • • • • • • • • • •	Scott	+	16 ft. e. of w. line.
	• • • • • • • • • • • • • • • • • • • •	Genesee	x	21 ft. e. of w. line.
		Sycamore	و _ ہ	21 ft e of w. line.
Rey		375 feet easterly	≃ - +	20 ft. s. of n. line.
Rich		Best	9 II	32 ft. w of e. line.
Kiley	Masten	Main	9 - H	17 ft. s. of n. line.
	Masten	Jefferson	H 9	32 ft. n. of s. line.
Kiley	Jefferson	500 feet easterly	9	17 ft. s. of n. line.
Roehrer ave	Best	Dodge	9	22 ft w. of e. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	. To	Size of Pipe, Inches.	System.	Location of Pipe.
Rose	Virginia.	Carlton	9	~	12 ft. e. of w. line
Rose	Carlton	High	9	Ξ	43 ft. e. of w. line.
Kose	High	North	+	=	18 ft. e. of w. line.
Sandusky	Fitzgerald	100 feet westerly	 	×	19 ft. n. of s. line.
Scott	Main	Illinois	4	≃ (34 ft. n. of s. line.
Scott	Mishigan	Bridge	<u>۔</u>	≃ :	22 ft. n. of s. line.
Scott	Michigan	Chicago	12	≃:	18 ft. n. of s. line.
Scott	van Mensselaer	Kallway	~ ~	∠ ;	16 ft. n. of s. line.
Scallists	Seneca.	450 feet south of Exchange.	- ,	4	28 ft. e of w. line.
SCINITY	Ciffeed	Ferry	۰ م	⊻ :	18 ft. e of w. line.
Selkitk	Viillord	400 feet northerly.	۰ و	∡ :	17 ft. w of e. line.
Seneca	Main	Washington	•	Ξ	44 ft. n. of s. line.
Seneral	Mishing	fillmore avenue	٥	: ۲	36 ft. s. of n. line.
Sellection	Michigan.	Louisiana	12	¥ ;	36 ft. s. of n line.
Selleca	Wildingan	Main	12	× :	29 ft. n. of s. line.
Selleca	Fillmore avenue	Dole	<u>0</u> `	∠ :	16 ft n. of s. line.
Sevmour	Fmelia	Lord	٠ .	¥ :	22 ft s of n. line.
Sexmonr	Hagerman	220 feet wester!"	4	م ۲	22 ft. n of s. line.
Sherman	Howard	North	7 (۵ ک	32 It. S. of n. line.
Sherman	North	Best	- -	: I	20 ft a of w line.
Shumway	William	Peckham	•	: ×	33 ft w of e line
Shumway	Broadway.	Peckham	9	×	34 ft. w of e line
Shumway	Howard	William	9	~	18 ft. e. of w. line.
Sidway	Elk	Mackinaw	9	~	16 ft. w. of e. line.
Smith	Abbott road	Elk	2	×	20 ft w. of e line.
Smith	Abbott road	St. Stephen's place	9	~	35 ft. e. of w. line,
Smith	Elk	Seneca	9 <u>1</u>	~	18 ft. e. of w. line.

Smith	Howard	Oneida		33 ft. w.
Smith	Howard	Peckham	۔ د د	
Smith	1.0vejoy	Peckham	۰.	33 ft. w. of e.
Smith	Lovejoy	Broadway	۰.	23 ft. w. of e.
Smith	Clinton	Bristol	0	10 ft, e. of w.
Sommer	Seneca	125 feet southerly	61	34 ft. e. of w.
South	Louisiana	Ohio	_ _	22 ft. s. of n. l
South	Louistana	Hamburgh	_ ح	20 ft. s. of n.
Southampton	Michigan	Masten	ر ح	to ft. s. of n.
	Jefferson	Masten	_ چ	39 ft. s. of n.
	Seneca	Swan	_ →	32 ft. e. of w.
_	Michigan	:	_ →	35 ft. s. of n.
_	Cedar	N. Y. C. R. R	9	24 ft. n. of s.
_	Emslie		_ _	1 7 1
	Michigan	Main	2	24 ft. n. of s.
	Chestnut	Pine	_ _	36 ft. n of s.
_	Pine	Cedar	-	35 ft. s. of n.
South Division	Emslie	Lord	-	34 ft. s. of n.
South Ogden	William	L. V. R. R	. 9	7 ft. e. of w.
Spring	Cherry	Genesee		25 ft. e. of w.
Spring	Genesee	Broadway	_ →	30 ft. e. of w.
Spring	Broadway	William	 	39 ft w. of e.
Spring	William	Clinton	9	40 ft. e. of w.
Spring	Clinton	Eagle	-	25 ft. w. of e.
Spruce	Cherry	Broadway	_ .c	35 ft. w of e.
Stanton	Howard	Peckham		31 ft w. of e
Stanton	Lovejoy	Broadway	۔۔	18 ft. w. of e.
Stanton	Peckham	Lovejoy.	_	34 ft. e. of w.
St. Paul	Main	30 · feet easterly		18 ft. s. of n.
St. Paul	Oak	624 feet westerly		17 ft s. of n.
Strauss	Genesee	Sycamore		20 ft. w. of e.
Strauss	Sycamore	Broadway		22 ft. e. of w.
Superior	Spring	Jefferson		22 ft n. of s.
Swan	Main	Ellicott	2	27
Swan	Ellicott	Cedar	-	20 It. n.
Swan	Cedar	Seneca	_	39 ft. s. of n. line.

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Schedule

Street.	From	To To	Size of Pipe, Inches.	System.	Location of Pipe.
Sweeney	Best	Genesee	9	Ξ	32 ft. w. of e. line
Sweet avenue	Broadway	Kent		~	16 ft. e. of w. line.
Sycamore	Oak	Spring	2	~	42 ft. n. of s. line
Sycamore	Spring	Jefferson	4	~	tt. s. of n. line
Sycamore	lefferson	Beckwith	7	×	20 ft. n. of s. line
Sycamore	Adams	Johnson	· •	2	41 ft. n. of s line
Sycamore	Johnson	Sherman	•	~	42 ft. n. of s line
Sycamore	Sherman	Fillmore avenue	9	×	26 ft. s. of n. line.
Sycamore	Fillmore avenue	Lathrop	20	×	23 ft. n of s. line
Tennessee	South	Erie Railroad	• ·	× :	20 ft. e. of w. line
Tennessee	Mackinaw	Tecumseh	د	≃.	42 ft. e. of w. line
Thomas	Howard	William	.	×	18 ft. w. of e. line
Townsend	Lovejoy	William	۰ و	24	33 ft. w. of e. line
Troupe	Seneca	Kailroad	۰	<u>ا</u> کم	38 ft. e. of w. line
Thomas	Howard	Metcalfe	•	2	32 ft. e. of w. line
Townsend	Lovejoy.	Broadway	•	2	33 ft. w. of e. line
Tupper	Main	Washington	12	Ξ	24 ft. s. of n. line
Tupper	Main	Michigan	50	~	16 ft. n. of s. line
Tupper	Washington	Michigan	9	~	17 ft n. of s. line
Tousey	Sycamore	Champlin	4	2	25 ft. w. of e. line
Union	Eagle	Clinton	4	×	17 ft. e. of w. line.
Union	Clinton	William	•	×	17 ft. w. of e. line
Urban alley	North	High	4	Ξ	11 ft. e. of w. line.
Utica	Main	Jefferson	ت 	Ξ	26 ft. n. of s. line
Utica	Jefferson	Dupont	ာ -	=	ft. s. of
Utica	Dupont	Humboldt parkway	9	Ξ	41 ft. s. of n. line.
Vandalia	South	Railroad	4	<u>~</u>	ft. e. of w.

Vandalia	Mackinaw	Sandusky	9	~	21 ft. w. of e. line.
Van Rensselacr	Seneca	Porter	7	<u>~</u>	20 ft. w. of e. line.
Van Rensselaer	Seneca	Elk	. 9	×	20 ft. w. of e. line.
Vary	Spring	Jefferson	4	~	21 ft. s. of n. line.
Vine	Elm	Oak	3	~	28 ft. n. of s. line.
Virginia	Jefferson	Cherry	20	~	23 ft. n. of s. line.
Virginia	Cherry	Rose	9	×	4 ft. n. of s. line.
Walden avenue	Best	Williamsville road	01	I	24 ft. n. of s. line.
Walden avenue	Bailey avenue	780 feet west of City line	01	Ξ	11 ft s. of n. line.
Walden avenue	End of 10-inch pipe	559 feet easterly	_ •	Ξ	11 ft. s. of n. line.
Walnut	Genesee	Eagle	 •	~	40 ft. w. of e. line.
Washington	Exchange	Tupper	12	Ξ	ft. e. of w.
Washington	Ohio	Exchange	01	≃.	26 ft. e. of w. line.
Washington	Exchange	Ohio	12	2	ft. e. of w.
Washington	Exchange	Genesee	_ و	 ≃	38 ft. e. of w. line.
Washington	Tupper	500 feet southerly	9	≃	ft. w. of e.
Washington	Tupper	350 feet northerly	9	~	ft. w. of e.
Washington	Goodell.	High	9	Ξ	ft. w of e.
Washington	Tupper	Goodell	12	Ξ	ft. w. of e.
Walter	Elk	Perry	9	~	25 ft. w. of e. line.
Walter	Perry	Seneca	9	_ بد	ft. w. of e.
Watson	Clinton	Broadway	۔ . ـ و	≃¦	e. of w.
Waverly	Glenwood avenue	Railroad avenue	9	I	e. of w.
Weaver alley	Goodell	Virginia.	7	Ξ	w. of e.
Welker	Utica	Glenwood	 -+	I	e. of w.
Welker	Glenwood avenue	Ferry	_ •	H	e. of w.
Wells	Seneca	Exchange	-	~	e. of w.
West Bennett	Clinton	William	-	×	e. of w.
West Parade avenue	Northampton	300 feet southerly	၁	×	e. of w.
William	Michigan	Pratt	 0	×	s. of n.
William	Pratt	Jefferson	- 0	×	n. of s.
William	Jefferson.	Adams	50	~	42 ft. s. of n. line.
William	Emslie	766 feet easterly	9	×	s. of n.
William	Adams	N. Y. C. R. R	0	- ≃	
William	N. Y. C. R. R	Williamsville road.	12	- ≃:	s. of n. 1
William	North Ogden	South Ogden	9	_ ≃	23 ft. s. of n. line.

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ı ıvnat System.	Location of Pipe.	23 ft. s. of n line. 42 ft. e. of w. line. 38 ft e. of w. line. 15 ft. e. of w. line. 14 ft. e. of w. line. 20 ft. e. of w. line. 39 ft. w. of e. line. 22 ft. n. of s. line.
1a 01	System.	XXXIXXII
ıpe, an	Size of Pipe, Inches.	9 20 9 9 9 9 9 9
ing Location, Size of P		City line
Schedule of It aler 1'the land in the City, graing Location, Size of Pipe, and on undat System.	Frog	South Ogden. William Clinton. Sycamore Sycamore Hogden. Avenue A
Schedule of 11 ater I	Street.	William

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

WEST SIDE

NiagaraNilitary road
Military road
bryant Bryant Bryant Nigara Niagara Main
Michigan Main Breckenridge Arkansas. Ferry Huron West avenue. Niagara.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

			Size of	·w	
Street	From	c	Pipe, Inches.	Syste	Location of Pipe.
Bouck avenue	Dewitt	Herkimer	9	×	48 ft. s. of n. line.
Bouck avenue	Delaware avenue	Main	و	Ŧ	45 ft. s. of n. line.
Brayton	Vermont	Rhode Island	9	Η	32 ft. w. of e. line.
Brayton	Rhode Island.	Massachusetts	•	Ξ	20 ft. e. of w. line.
Breckenridge	Niagara	Railroad	9	×	42 ft. n. of s. line.
Breckenridge	Niagara	West avenue	91	×	25 ft. s. of n. line.
Breckenridge	West avenue	Dewitt	4	×	29 ft. s. of n. line.
Breckenridge	1)ewitt	Barton	င	2	25 ft. s. of n. line.
Breckenridge	Barton	Herkimer	9	H	33 ft. s. of n. line.
Breckenridge	Herkimer	Hoyt	9	Ξ	24 ft. n. of s. line.
Bremen	Vermont	Rhode Island	9	Ξ	35 ft. w. of e. line.
Bridgeman	Amherst	Chandler	ပ	ĸ	25 ft. e. of w. line.
Bryant, S. S	Linwood avenue	Howard avenue	9	Ξ	12 ft. n. of s. line.
Bryant, N. S	Elmwood avenue	250 ft. west of Ashland ave.	9	Ξ	14 ft. s. of n. line.
Bryant, N. S	Kichmond avenue	210 feet easterly	9	Η	14 ft. s. of n. line.
Bryant	Richmond avenue	Howard avenue	9	H	13 ft. n. of s. line.
Butler	Richmond avenue	Delaware avenue	9	Ξ	39 ft. s. of n. line.
California	West avenue	Herkimer	9	Ξ	23 ft. n. of s. line.
Canal	Erie	Commercial	9	ĸ	17 ft. s. of n. line.
Canal	Lloyd	60 feet easterly	4	2	18 ft. n. of s. line.
Carolina	Erie Canal	Sixth	4	24	39 ft. s. of n. line.
Carolina	Sixth	Niagara	9	ĸ	35 ft. s. of n. line.
Carolina	Prospect avenue	Tupper	•	24	24 ft. n of s. line.
Carolina	Niagara	Prospect avenue	9	ĸ	35 ft. s. of n. line.
Cary	Lot line bet. lots 171 and 172	280 feet west of Morgan	4	~	27 ft. n. of s. line.
Chapin parkway	Clinton avenue	Delavan avenue	20	Ξ	6 ft. w. of e. line.
Chapin parkway	Soldiers' place	Delavan avenue	•	24	e. of w.
Chenango	Utica	Ferry	•	H	36 ft. e. of w. line.

Chippewa	Franklin	Georgia	9	~	ft. n. of s.	
Chippewa	Main	Franklin	9	Ξ	ft. n. of s.	
Church	Upper Terrace	Delaware avenue	01	24	ft. s. of n.	
Church	Lower Terrace	Jackson	9	- ≃	ft. s. of n.	
Churchill	Amherst	Austin	7	×	ft w. of e.	
Cleveland avenue	Delaware avenue	Elmwood avenue	9	=	ft. s. of n.	
Clifton place	Cottage	Norris place	7	=	ft. w. of e.	
Clinton avenue	Niagara	West avenue	9	x	ċ	
Clinton avenue	West avenue	Herkimer	9	_ 쏰	ft. s. of n.	
Clinton avenue	Herkimer	Richmond avenue	50	Ξ	ft. n. of s.	
Clinton avenue	Richmond avenue	Chapin parkway	2	H	ft s. of n. 1	
Clinton avenue	Chapin parkway	500 feet easterly	و	Ξ	ft. s. of n.	
College	Cottage	North	9	Ξ	ft. e. of w.	
Commercial	Terrace	Water	9	x	ff.e.	
Congress	Clinton avenue	Delavan avenue	9	Ξ	ft. e. of w.	
Connecticut	Niagara	Prospect avenue	20	Ξ	ft. n. of s	
Connecticut	Prospect avenue	Fargo avenue	 -	=	ft. s. of n	
Connecticut	Fargo avenue	West avenue	••	Ξ	ft. s. of n.	
Connecticut	West avenue	Plymouth avenue	91	Ξ	ft n of s	
Connecticut	Plymouth avenue	Richmond avenue	9	H	ft. s. of n	
Cottage	Mariner	Hudson	01	I	ft. n. of s	
Court	Main	Terrace	36	x	ft. n. of s.	
Court	Main	Pearl	 _	H	ft. n. of s.	
Court	Morgan	Terrace	9	×	ft n. of s.	
Court	Wilkeson	Georgia	+	×	ft. n of s.	
Crescent avenue	Jewett avenue	End of street	9	Ξ	ft. e. of w.	
Danforth	Forest avenue	Bradley	9	×	ft. e. of w.	
Dart	Forest avenue	Bradley	4	≃.	ft. e. of w.	
Dayton	Main	Prime.	7	×	ft. n.	
Dearborn	Amherst	350 feet northerly	9	~	ft. c. of w.	
Dearborn	Parish	Hertel avenue	9	- يد	ft. w. of e. l	
Delavan	Grant	Tryon place	9	<u>~</u>	ft s. of n.	
Delavan avenue	Chapin parkway	300 feet easterly	4	≃	20 ft. s. of n. line.	
Delavan avenue	Chapin parkway	Linwood avenue	3C	Ξ:		
Delavan avenue	Linwood avenue	Main	91	Ξ,	24 ft. n. of s. line.	
Delavan avenue	Niagara	West avenue	 ت	<u> </u>	33 ft. s. of n. line.	

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

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Street.	From	5	Size of Pipe, Inches.	System.	Location of Pipe.
			_		
Delavan avenue	West avenue	Congress	٥	¥	12 ft. s. of n. line.
Delayan avenue	Chapin parkway	150 feet westerly	စ	Ξ	25 ft. n. of s. line.
Delaware avenue	Church	Niagara	7	×	38 ft. e. of w. line.
Delaware avenue	Niagara	Chippewa	01	×	58 ft. e. of w. line.
Delaware avenue	Chippewa	Virginia	01	H	58 ft. e. of w. line.
Delaware avenue	Virginia	North	ن	Η	41 ft. w. of e. line.
Delaware avenue.	North	585 feet north of Ferry	13	Η	36 ft. w. of e. line.
Delaware avenue	535 feet north of Ferry	775 feet north of Ferry	10	Η	w. of e.
Delaware avenue	775 feet north of Ferry	Chapin place	ç	H	16 ft. w. of e. line.
Delaware place	Delaware avenue	Virginia	-7	H	n. of s.
Dewitt.	Breckenridge	Bouck avenue	7	~	w. of e.
Dewitt	Bouck avenue	Forest avenue	ပ	×	24 ft. e. of w. line.
l'ewitt	Forest avenue	Bradley	7	×	19 ft. w. of e. line
Eagle	Main	Pearl	ပ	Η	n. of s
Eagle	Franklin	Morgan	7	×	26 ft. s. of n. line.
Eagle	Main	Pearl	01	×	30 ft n. of s line.
Eagle	Pearl	Franklin	9	Ξ	25 ft. n. of s line.
East	Parish	Farmer	91	≃.	39 ft. e. of w. line.
East	Farmer	Hertel avenue	91	×	39 ft. e. of w. line.
Edward	Virginia	220 ft. e. of Delaware ave	4	Ξ	38 ft. n. of s. line.
Effner	Georgia	Carolina	ဇ	2	19 ft. e of w. line.
Efner	Carolina	Maryland	7	×	32 ft. w. of e. line.
Efner	Maryland.	II udson	9	x	33 ft. w of e. line.
Eighteenth	Connecticut	Vermont	ဇ	Ξ	21 ft. w. of e. line.
Eighteenth	Khode Island.	Massachusetts	<u>د</u>	Ξ	32 ft. e. of w. line.
Eighteenth	Massachusetts	Hampshire	ပ	Ξ	20 ft. e. of w. line.
Elmwood avenue	North	Bryant	9	Ξ,	نه
Elmwood avenue	Hodge avenue	Utica	۔ د	I	24 ft. e. of w. line.

Elmwood avenue	Lexington	Highland	H 9	30 ft. w. of e. line.
Elmwood avenue	Ferry	Auburn avenue	#: - 9	e. of w
Ene	Main	I errace	= : c \	۳, ت
Erie	I errace	Water	x	it n. of s.
Erie	Water	Buffalo River	4 자	ft. s. of n.
Erie	Main	Pearl	Io R	ft. n. of s.
Essex	Massachusetts	Rhode Island	H 9	ft e. of w.
Express	Pearl	125 feet westerly	. 9	ft. n. of s.
Fargo avenue	Connecticut	270 feet southerly	H +	ft. e. of w.
Fargo avenue	Connecticut	Hampshire	H 9	38 ft. w. of e. line.
Fargo avenue	Hampshire	Niagara	6 R	38 ft. w. of e. line.
Fargo avenue	Hudson	Pennsylvania	9 8	40 ft. e. of w. line.
Fargo avenue	Jersey	Porter avenue	H 9	23 ft. w. of e. line.
Fargo avenue]ersey	Pennsylvania	Н 9	19 ft. e. of w. line.
Farmer	Niagara	Gurnsey	6 R	20 ft. n. of s. line.
Farmer	Curnsey	Tonawanda	و لا	42 ft. s. of n. line.
Ferguson	Herkimer	Grant	H 9	32 ft. n. of s. line.
Ferry	Erie Canal	Niagara	~	26 ft. s. of n. line.
Ferry	Gelston	West avenue	د _ R	41 ft. s. of n. line.
Ferry	West avenue	Richmond avenue	H 9	40 ft. s. of n. line.
Ferry	Main	Richmond avenue	12 H	55 ft. n. of s. line.
• Fifteenth	York	Vermont	9 	41 ft. e. of w. line.
Fifteenth	Vermont	Rhode Island	9	26 ft. e. of w. line.
Fifteenth	Rhode Island	Hampshire	9 - H	40 ft. w. of e. line.
Fifth.	Court	Pennsylvania	ع ح	34 ft. w. of e. line.
Fly	State	Maiden Lane	¥ →	20 ft. s. of n. line.
Forest avenue	Erie Canal	Niagara	≃	22 ft. n. of s. line.
Forest avenue	Niagara	West avenue		42 ft. s. of n. line.
Forest avenue	West avenue	Lincoln parkway		40 ft. s. of n. line.
Forest avenue	Richmond avenue	Carmine place	H - 9	40 ft. n. of s. line.
Fourteenth	Wadsworth	Porter avenue		100 ft. e. of w. line.
Fourteenth	Porter avenue	500 feet north of Vork	H - 9	25 ft. e. of w. line.
Fourteenth	Connecticut	130 feet southerly	8	21 ft e. of w. line.
Fourteenth	Connecticut	Khode Island	H 9	24 ft. e. of w. line.
Fourteenth	Rhode Island	Hampshire	Н -	38 ft. w. of e. line.
Fourth	Genesee	430 feet northerly	¥ •	25 ft. e. of w. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Size of Highe, Higher Cocation of Pipe. Inches.	Cut. 6 R 35 ft. w. of e. line. 6 R 17 ft. w. of e. line. 6 R 28 ft. w. of e. line. 6 R 28 ft. w. of e. line. 6 R 28 ft. w. of e. line. 6 H 30 ft. w. of e. line. 16 H 30 ft. e. of w. line. 16 H 30 ft. w. of e. line. 16 H 30 ft. w. of e. line. 17 ft. w. of e. line. 18 H 30 ft. w. of e. line. 19 ft. n. of s. line. 10 ft. s. of n. line. 10 ft. e. of w. line. 10 ft. e. of w
To T	300 feet southerly. Maryland Pennsylvania Swan Eagle. Chippewa 500 feet northerly. Tupper. North Jersey. Vermont 216 ft south of Connecticut Niagara. Hampshire Bouck avenue Pearl Franklin Franklin Franklin Franklin Gourt C. R. R. Round House Hertel avenue Hampshire Arnold.
From	Carolina Virginia. Jersey. Swan Eagle. Chippewa. Soo feet north of Chippewa. Tupper. Virginia. Massachusetts Porter avenue. Rhode Island Stand Pipe. Valve House. Ferry Main Pearl Niagara Niagara Niagara Niagara Niagara Niagara Sixth Court. Gourt. Berry Bouck avenue.
Street.	Fourth Fourth Fourth Fourth Franklin Gelesee

Richmond avenu
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Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.	
1 1	Front organia	I ake View avenue			12 ft s of n line	-
Tereson Tereson	Prospect avenue	West avenue	· ·	; I	: -	
ersey	Porter avenue	Richmond avenue	91	Œ	27 ft. s. of n. line.	_
lersev	Fourteenth	200 feet easterly	9	Ξ	20 ft. s. of n. line.	• • •
]ersev	Lake View avenue	Canal	9	×	43 ft. s. of n. line.	-
Jewett avenue.	Main	Davis	9	Ή	'n.	
John	Seneca	Pearl	→	Ξ	<u>.</u> ¥	•
Johnson place	Delaware avenue	Carolina	4	≃.	24 ft. s. of n. line.	
Kail	Amherst	Austin	- •	~	≍	-
Ketchum place	Jersey	York	9	Ξ	₹	• • •
Kremlin alley	Eagle	125 feet southerly	4	H	7 ft. w of e. line.	
Lake View avenue	Pennsylvania	Porter avenue,	9	~	40 ft. e. of w. line.	
Lincoln parkway.	Forest avenue	South line of Park	<u>۔</u>	2	×	
Linwood avenue	North	Ferry	 •	H	e Se	-
Linwood avenue.	Ferry	Delavan avenue	•	H	of e.	
1.loyd	Main	South end of bridge	4	2	<u>`</u>	
Lloyd	South end of bridge	Prime	•	24	<u>`</u>	Ŭ
Main	Vernon	Russell	4	Η	¥	
Mariner	Virginia	North	૭	Η	30 ft. e of w. line.	•
Maryland	Seventh	100 feet west of Fourth	+	2	29 ft. n. of s line.	_
Maryland	Tenth	West avenue	9	~	25 ft. n. of s. line.	-
Maryland	West avenue	Twelfth	9	×	41 ft. s of n. line.	
Maryland	Cottage	College	9	Ξ	Ψ,	
Maryland	Niagara	Seventh	9	~	0	
Maryland	Niagara	Prospect avenue	9	~	ñ n	
Massachusetts	Seventh	Niagara	36	~	22 ft s. of n. line.	
Massachusetts	Niagara	Prospect avenue	36	~	n n	
Massachusetts	Front	Seventh	- •	Ξ	50 ft. n. of s. line.	

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Massachusetts.	Niagara	L'rospect avenue	٥,	Ξ:	s o
Massachusetts.	Prospect avenue	Fargo avenue	•	Ξ	œ.
Massachusetts	Plymouth avenue	Fourteenth	9	Ξ	s of
Massachusetts	Fargo avenue	Plymouth avenue	စ	Ξ	of s.
Massachusetts	Fourteenth	Richmond avenue	9	H	n. of s
Mechanic	Terrace	Canal		2	n. of s
Michigan	Balcom	Bouck	9	Ξ	of w.
Michigan	Bouck avenue	Delavan avenue	9	Ξ	v. of e.
Military road	Amherst	. Austin	9	×	v. of e.
Military road	Austin.	Hertel avenue	01	~	v. of e.
Mohawk	Main	Niagara	9	×	. of n.
Mohawk	Niagara	Wilkeson.	4	- *	a. of s.
Morgan	Chippewa	Mohawk	-1	~	-
Morgan	Niagara	Eagle	4	×	w jo:
Niagara	Main	250 ft. north of Connecticut	16	×	. of w.
Niagara	250 ft. north of Connecticut		77	Ξ	v. of e.
Niagara	Connecticut	Massachusetts	20	Ξ	12 ft. e. of w. line.
Niagara	Massachusetts	Front avenue	9	~	. of w.
Niagara	Front avenue	Breckenridge	91	×	20 ft. w. of e. line.
Niagara	Albany	l'orest avenue	+	~	of w.
Niagara	Breckenridge	300 feet northerly	→	~	v. of e.
Niagara	Bouck avenue	250 feet southerly	7	×	v. of c.
Niagara	Bouck avenue	Forest avenue	+	×	19 ft. w. of e. line.
Niagara	Forest avenue	Parish	91	×	18 ft w. of e. line.
Niagara	Amherst	Parish	9	×	. of w.
Niagara	Amherst	City line		~	v. of e.
Nineteenth	Khode Island	Ferry	9	Ξ	of w.
Norris place	Cottage	Wadsworth	+	H	15 ft. s. of n. line.
North	Main	Porter avenue	12	- H	1. of s.
North Pearl	Virginia.	North	9	H	28 ft. e. of w. line.
Norton	Water	Peacock	9	~	
Orton place	Hudson	Pennsylvania	9	Ξ	٠ و
Parish	Niagara	East	91	2	40 ft. s. of n. line.
Park	Virginia	North	9	Ξ	jo.
Park place	Delaware avenue	Johnson place	-	۔ ح	18 ft. n. of s. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
Peacock	Frie	Norton	9	2	30 ft. s. of n. line.
Pearl	Commercial	Terrace	-	~	24 ft. w. of e. line.
Pearl	Terrace	Court.	و.	Ξ	40 ft. w. of e. line.
Pearl	Terrace	200 feet northerly	9	~	14 ft. w. of e. line.
Pearl.	Court.	Genesee	4	Ξ	36 ft. e. of w. line.
Pearl	Genesee	Tupper	7	H	29 ft e. of w. line.
Pearl	Virginia	250 feet southerly	4	Ξ	22 ft. w. of e. line.
Pearl.	Terrace	Niagara	2	~	26 ft. e. of w. line.
Pearl	Niagara	Huron.	12	×	24 ft. e. of w. line.
Pennsylvania	Niagara	175 feet west of Fourth	9	×	24 ft. n. of s. line.
Pennsylvania	Prospect avenue	150 feet easterly	7	H	24 ft n. of s. line.
Pennsylvania	West avenue	Plymouth avenue	•	×	25 ft n. of s. line.
Pennsylvania	Plymouth avenue	Wadsworth	9	H	25 ft. n. of s line.
Pennsylvania	Fifth	250 feet westerly	6	~	12 ft. n. of s. line.
Plymouth avenue	II udson	Jersey	9	Ή	25 ft. e. of w. line.
Plymouth avenue	Porter avenue	Connecticut	91	Ξ	38 ft. w. of e. line.
Plymouth avenue	Connecticut	Rhode Island	9	I	41 ft. w. of e. line.
Plymouth avenue	Rhode Island	Massachusetts	<u>۔</u>	Ξ	25 ft. e. of w. line.
l'lymouth avenue	Massachusetts	Hampshire	 د	I	43 ft. w. of e. line.
Plymouth avenue	Hampshire	School	9	Ξ	25 ft. w. of e. line.
Porter avenue	Sixth	200 feet west of Fourth	4	×	21 ft. n. of s line.
Porter avenue	Sixth	Seventh	9	24	22 ft. n. of s. line.
Porter avenue	Seventh	Prospect avenue	4	Ξ	26 ft. n. of s. line.
Porter avenue	Prospect avenue	West avenue	20	Ξ	8 ft. n. of s. line.
Porter avenue	West avenue	Fourteenth	24	H	8 ft. n of s. line.
Porter avenue	Prospect avenue	West avenue	54	2	8 ft. s of n. line.
Porter avenue	Fourteenth	The Circle	12	H	71 ft n. of s. line.
Porter avenue	Jersey	Fourteenth	12	H	ft. n. of s.

Prime	Main	Hanover	4 —	20 ft. e. of w. line.
Prospect avenue	Massachusetts	Huron	36. R	18 ft. w. of e. line.
Prospect avenue	Huron	Hudson	ر ج	38 ft. e. of w. line.
Prospect avenue	Hudson	Porter avenue	9 9	25 ft. w of c. line.
Prospect avenue	Porter avenue	Vermont	24 K	12 ft. w. of e. line.
Prospect avenue	Porter avenue	Connecticut	20	12 ft. e. of w. line.
Prospect avenue	Connecticut	Vermont	=	ft. w. of e. l
Prospect avenue	Vermont	Hampshire.	9	42 ft w of e.
Prospect avenue	Hampshire	Niagara	6 R	42 ft. w of e
Penfield	West avenue	Niagara	6 R	ă
Public alley	Jersey	Fourteenth	=	13 ft. s. of n.
Rhode Island	Sixth	Niagara		40 ft. s. of n.
Rhode Island	Prospect avenue	Richmond avenue		25 ft. n. of s
Richmond avenue	Jersey	Forest avenue	16 H	ft. e. of w.
east	Ferry	Butler	Ξ +	ft. w. of e
Richmond avenue, east side.	Butler	Anderson place	II 9	ft. w. of e.
River	Erie	Peacock slip.	0 R	ft. e. of w.
Seneca	Main	Franklin	Ξ +	ft. s. of n.
Seneca	Main	Terrace	12 R	ft. n of s.
Seneca	Main	too feet westerly	6 R	50 ft. n. of s. line.
School	Fargo avenue	Prospect avenue	6 R	ft. n. of s.
School	Fargo avenue	Plymouth avenue	H 9	ft. n. of s.
Seventeenth	Vermont	Connecticut	H 9	ft. e. of w.
Seventeenth	Richmond avenue	Connecticut		ft. e. of w
Seventh	Court.	Massachusetts		ft w. of e.
Seventh	Wilkeson	Georgia.	4 R	ft. e. of w.
Seventh	Georgia	Porter avenue		ft w. of e.
Seventh	Porter avenue	Vermont		ft e. of w.
Seventh	Vermont	Khode Island		ft. e. of w.
Seventh	Vermont	Massachusetts		ft. e. of w.
Seventh	Rhode Island	Massachusetts		33 ft w. of e. line.
Seventh	Massachusetts	Front avenue		ft. e. of w.
Seventh.	Store-house	Court		t. e. of w.
Sherwood	Hampshire	Arkansas	9	t. e. of w.]
Shields avenue	Massachusetts	Utica		23 ft. e. of w. line.
Sixteenth	York	Vermont	0	40 ft. w. of e. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

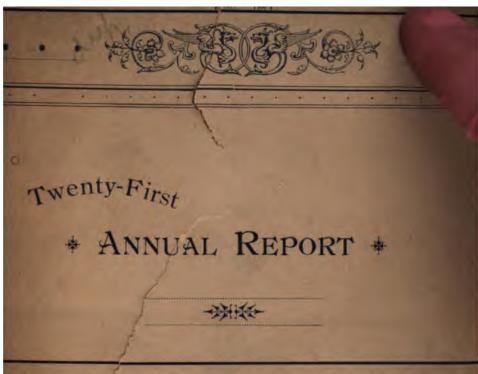
	:		!.!	i !	
Street.	From	£ :	Size of Pipe, Inches.	System.	Location of Pipe.
Sixteenth	Massachusetts	Hampshire	 •	Ξ	20 ft. e. of w. line.
Sixth	Court	Carolina	9	×	24 ft. w. of e. line.
Sixth	Court	Porter avenue	50	×	48 ft. w. of e. line.
State	Canal	Water	7	~	21 ft. e. of w. line.
ohn's place	Wadsworth	225 feet westerly	-	Ξ	32 ft. s. of n. line.
St John's place	Orton place	325 feet easterly	7	Ξ	47 ft. n. of s. line.
mer	Main	Howard avenue	٥	Ξ	44 ft. n. of s. line
Summer	Howard avenue.	100 feet westerly	9	Ξ	9 ft n. of s. line.
wan	Main	Pearl	9	Ξ	24 ft. s. of n. line.
Fenth	Carolina	Hudson	9	2	25 ft. w. of e. line.
Perrace, lower	Court	Seneca	0	2	61 ft. e. of w. line.
Terrace, lower	Court.	Mechanic	9	<u>~</u>	26 ft. e. of w. line.
l'errace, upper	Seneca	Main	20	×	118 ft e. of w. line.
Ferrace, upper	Pearl	Main	9	~	27 ft. s. of n. line.
Perrace, upper	Eagle	Daw alley	9	~	13 ft. w. of e. line
l'errace, upper	Court.	275 feet southerly	7	×	11 ft. w of e. line.
errace	Franklin	Evans	့	≃	runs across Terrace.
Chirteenth	Pennsylvania.	Jersey	9	I	38 ft. w. of e. line.
hirteenth	Vork	390 feet southerly	7	I;	13 ft. e. of w. line.
hirteenth	Vork	Rhode Island	9	I	44 ft. w. of e. line.
hirteenth	Khode Island	Massachusetts	۔ ص	Ξ	44 ft. w. of e. line.
Phirteenth	Massachusetts	Hampshire	9	Ξ	37 ft. w. of e line.
Thompson	Amherst	Farmer	 	~	20 ft. e of w. line.
Tonawanda	Amherst	Niagara	2	~	22 ft. w. of e. line.
Fracy	Delaware avenue	Carolina	寸	~	16 ft. n. of s. line.
Fryon place	Bouck avenue	Delavan avenue	9	Ξ.	15 ft. e. of w. line.
Tupper	Main	Virginia.	8	*	21 ft. s. of n. line.
per	Delaware avenue	500 feet westerly	4	Ĭ	33 ft. s. of n. line.

Twelfth	Viroinia	Maryland	9	Ξ	28 ft. w. of e. line.
Thion	Moin	I inwood avenue	٠	I	90
	Linwood avenue	Delaware avenue) -	:=	, jo
Utica	Delaware avenue.	160 feet west of Elmwood	_ ن	H	n of s.
Utica	Flmwood avenue	Ashland avenue	"	H	11 ft. s. of n. line.
Utica	Elmwood avenue	125 feet westerly	ব	=	s. of n.
Utica	Richmond avenue	Chenango	9	I	n. of s.
Utica	Richmond avenue	200 feet easterly	د	H	s. of n.
Utica	Chenango	Eighteenth.	9	H	s of n.
Utica	Eighteenth	Shields avenue	9	_ H	n. of s.
Utica	Shields avenue	Massachusetts	9	— 王	s. of n.
Vermont	Richmond avenue	West avenue	9	=	n. of s.
Vermont.	West avenue	Niagara	91	Ξ	s. of n.
Vermont	Prospect avenue	Seventh	77	<u>~</u>	n. of s.
Vermont	Seventh	Front avenue	- 50	×	n. of s.
Vermont	Seventh	Front avenue	m	Η	s. of n.
Vermont	Niagara	Seventh	3ç	~	s. of n.
Vermont	Niagara	Seventh	7	Ξ	s. of n.
Virginia.	Cottage	Tupper	 •	Ξ	s. of n.
Virginia	Cottage	Franklin	01	Ξ	n. of s.
Virginia	Franklin	Main	2	Ξ	n. of s.
Virginia.	Tupper	West avenue	50	x	n. of s.
Virginia	West avenue	Prospect avenue	ပ	ح	n. of s.
Virginia	Prospect avenue	Seventh	9	ĸ	s, of n.
Virginia	Seventh	Sixth	9	2	n. of s.
Virginia	Fourth	Fifth	၁	ح	s. of n.
Virginia	Fifth	Front avenue	ဖ	x	n. of s
Wadsworth	Allen	Pennsylvania	7,	Ξ	n. of s.
Wadsworth place	College	Wadsworth park	9	- "	n of s.
Water	Commercial	Norton	9	~	e. of w.
Webster	Ferry	Breckenridge	- •	Ξ	w of e.
West avenue	Carolina	Virginia	စ	_ ≃	20 ft. w. of e. line.
West avenue	Virginia	Porter avenue	20	<u>س</u>	e. of w. ∣
West avenue.	Porter avenue	600 feet southerly	4	 #	w. of e.]
West avenue	Porter avenue	Connecticut	 •	H	38 ft. w. of e. line.
West avenue	Connecticut	Vermont	91	H	ü

Schedule of Water Pipe laid in the City, giving Location. Size of Pipe, and on what System.

	From Albany	To Breckenridge	Size of Pipe, Inches.	5ystem.	Location of Pipe.
Ver	ermont	Forest avenue	9	z I	24 it. e oi w. line. 27 ft. e. of w. line.
Ha	Hampshire	Albany	9	~	28 ft. e. of w. line.
Ric	hmond avenue	York	9	H	27 ft. n. of s. line.
<u>ق</u> ک	Georgia	Carolina	4	~	24 ft w. of e. line.
ر ع :	Carolina	Hudson	ن 	2	37 ft. e. of w. line.
့် :	Court.	Sixth	2	*	25 ft. s of n. line.
Six.	Sixth	Seventh	4	2	40 ft. n. of s. line.
.: Sev	Seventh.	Mohawk	4	2	27 ft. s. of n. line.
Ma	Massachusetts	Hampshire	9	Ξ	25 ft. e. of w. line.
<u>ج</u>	West avenue	Richmond avenue	ح	Ί	43 ft. s. of n. line.

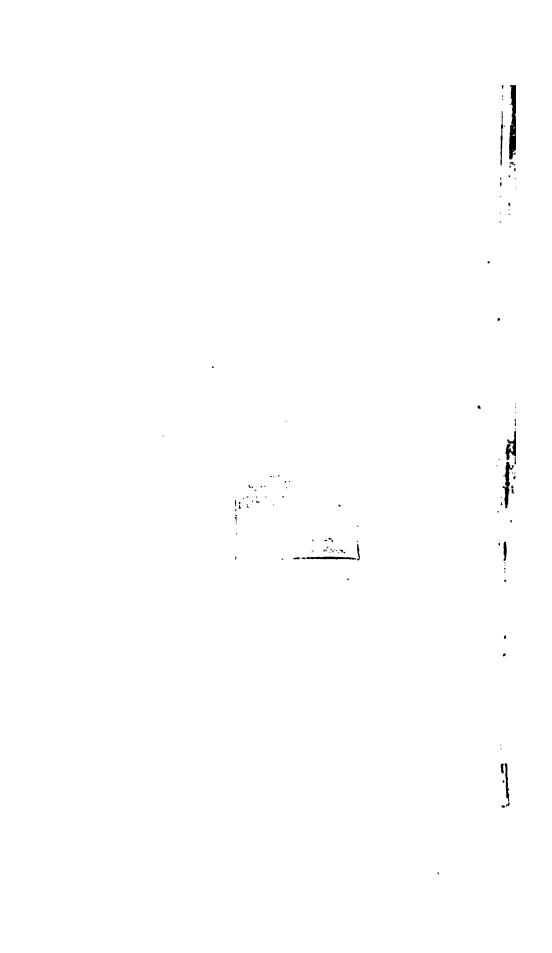




Buffalo City Water Works

◆ 1889. ◆

BUFFALO PUB. Lib'y



TWENTY-FIRST

ANNUAL REPORT

OF THE

pliments of

• Buffalo Pater Commissioners. •

PLEASE FACHANGE.

FOR

THE YEAR 1889.



TWENTY-FIRST

ANNUAL REPORT

OF THE

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· Buffalo Pater Commissioners.

PLEASE FACILINGE.

FOR

THE YEAR 1889.



BUFFALO:

Times Printing House, 195 Main Street.

1890.

OFFICERS-1889.

Board of Water Commissioners,
LOUIS P. REICHERT, Chairman,
JAMES RYAN, Secretary,
S. K. WORTHINGTON.

Superintendent and Engineer.
LOUIS H. KNAPP.

Registrar,
JOHN T. REES.

Chief Engineer of Steam Power.
PATRICK BRENNAN.

	·.			

Commissioners' Report.

To the Honorable the Common Council of the City of Buffalo:

In compliance with title 15, section number 10, of the City Charter, we have the honor to present herewith the twenty-first annual report of the Buffalo City Water Works.

The works generally, are in the best of order. Never during the City's ownership has so much work been done, so few leaks occurred, or so much revenue been received in one year. The occasional roily water in the winter time is caused by the unusual high winds, which, when the lake is not frozen over, stir up the sand at the bottom of the lake. The consumers are assured that no pollution of the water can arise from sewage or other like causes.

For a full and detailed statement of the transactions and condition of the works, the operations of the various departments, your attention is respectfully called to the reports of the Superintendent, the Registrar, and the Chief Engineer at the Pumping Stations, all of which accompany, and are made part of this report.

The Registrar's Report to the Board will show the exact financial standing, all expenditures for the year; this report gives all the vouchers paid through the regular channels of City business, the names of the parties from whom purchases were made, the nature of such purchases, and the amount paid therefor; the original vouchers are deposited in the office of the City Comptroller.

' RECEIPTS FOR WATER.

The total amount received by the Department for the year ending December 31, 1889, was \$542,952.35. This was \$48,174.83 more than from the same source during the previous year.

The expenditure by the Department during 1889, for all purposes, was as follows, viz.:

Interest on Water Bonds				\$172,691.74
Maintenance and Repairs				145,822.98
Improvements and Extensions				498,529.24
Frontage Tax rebated by the Council				226 .32
Dodge Farm Reservoir				97,095.05

PIPE LAYING.

There were laid during the year supply and distributing mains of various sizes, at a cost of \$267,169.98, as follows:

2 inch .		•	185	feet, a	at a cost of	\$	56.51
3 inch.			2,548	"	**		875.90
4 inch .			7,654	66,	**		5,200.59
6 inch.			76,843	"	**	(50,889.15
8 inch.			3,476	"	44		5,358.59
10 inch.			21,228	**	**		30,107.81
12 inch.			5,916	**	• "		10,037.45
16 inch .			8,541	"	• •	2	1,794.08
20 inch .			1,032	46	"		4,245.66
36 inch .			14,746	••	**	1:	28,604.24
Total .			142,169				67,169.98

Total length of pipe laid during the year, twenty-six miles, 4,889 feet.

The small pipes in the following named streets were taken up and replaced by larger ones, viz.:

Clinton street								2,720 feet.
Delaware avenue								
Eagle street								320 feet.
Eagle street								1,089 feet.
Franklin street								1,239 feet.
North Division street								1,835 feet.
Washington street .			•	•				660 feet.
Total								13.415 feet.

Water mains were laid in the whole, or parts, of 120 streets and alleys, and with the exception of 13,415 feet laid around the City Hall, and at other places as above, which were laid for a better fire protection, the old pipes being taken up and replaced by larger ones, were all laid in the outskirts of the City. The future extension of mains will wholly depend on the growth of the City in the North-Eastern and South-Eastern portions. The total length of water-pipe in the City, January 1, 1890, was 277 miles, 1,877 feet.

DODGE FARM RESERVOIR.

The long contemplated improvement of constructing on the Dodge Farm property a storage and distributing reservoir was commenced. Upon authority granted by Your Honorable Body, an advertisement asking for bids was inserted in the Buffalo and New York papers. In answer to same, we received eleven bids as follows:

O'Brien & Clark	\$334,502.30
D. F. Minehan	335,081.59
Yeomans & Co	365,205.41

John Hickler				0 4			,	12	\$375,129.91
C. E. Williams									
James Boland									
P. Hickler & Co.				*	*				417,751.39
P. B. McNaughton									
Charles Berrick .									444,413.11
T. C. Brook									
John Druar									

The contract was awarded to Messrs. O'Brien & Clark, May 23, 1889, they being the lowest bidders.

The work has been satisfactorily progressing. The amount of work done upon contract to date being \$95,376.81, which, in accordance with terms of contract, there has been retained \$14,376.81, leaving the amount paid contractors \$81,000. In addition to the above, there has been expended \$16,095.05 by this Department, same being for items of pipe and wages of Engineer and Inspectors.

NEW ENGINE.

With the completion of the Engine now under contract, the maximum pumping capacity of the works will be 95,000,000 each twenty-four hours. This addition to our plant will, we expect, be set up and in running order some time during March. There has been paid to the contractors as per terms of the contract, \$70,000, leaving a balance due of \$18,250 to be paid next year.

IMPROVEMENTS AND ADDITIONS AT LOWER PUMPING STATIONS.

There was expended at the Lower Pumping Station \$57,408.47 in the erection of a good substantial brick coal and boiler house, to which we have laid railroad tracks, to facilitate the receiving of coal by rail as well as by canal. There was also

expended in construction of a new tunnel, conduit, and pumpwell, to furnish water to Engine No. 6, the sum of \$31,833.30.

FIRE HYDRANTS.

There were placed upon the line of new work 164 fire-hydrants; the cost of all new fire-hydrants is included in the cost of pipe-laying. There is now a total of 2,438 fire-hydrants in use in the City. There were set to replace old hydrants with small openings ten improved fire-hydrants on line of old mains.

VALVES.

The number of valves set during the year upon new line of mains was 406, of various sizes, as follows, viz.:

			•			•				•			
3 inch.												٠.	10
4 inch.													23
6 inch.													293
8 inch.												٠.	9
10 inch.													27
12 inch.													10
16 inch.													15
20 inch.													2
24 inch.													I
36 inch.					_								16

The location of these valves is given under the head of Distribution.

BONDED DEBT.

The bonded debt of the Water Department, December 31, 1829, as authorized by acts of the Legislature, was \$3,435,882. This is an increase over what it was December, 1888, of \$325,000, same being issued to lay 36-inch main to Eastern part of the

City, and for purpose of constructing Dodge Farm reservoir. The interest paid during the year upon bonded debt was \$172,691.74.

SERVICES.

The number of new services put in during the year was 3,502. The total number in the City, January 1, 1890, was 36,161.

Respectfully submitted,

L. P. REICHERT, JAMES RYAN, S. K. WORTHINGTON,

Water Commissioners.

Received and filed.

REPORT

OF THE

Superintendent and Engineer

FOR

1889.

BUFFALO CITY WATER WORKS.

Superintendent and Engineer's Office.

Buffalo, January 1, 1890.

To Louis P. Reichert, James Ryan, S. K. Worthington, Water Commissioners:

Gentlemen—Herewith is presented the report showing the operation of the Department and the detailed statement of the same for the year 1889.

It shows that the current year has been one of unprecedented prosperity for the Department, the revenue collected, the amount of water pumped, the pressure maintained, and the work performed has been greater than in any previous year.

THE PUMPING STATION.

The alterations and additions as recommended last year on the south side of the Lower Pumping Station, providing a new engine-room, boiler-house, and a coal-shed were ordered and completed during the year.

The new twenty million gallon engine was tested and accepted. The capacity exceeded the amount guaranteed by five per cent., and the engine developed a duty of 122,255,512.2 foot-pounds per 100 pounds of coal, being nearly 16½ per cent. in excess of the amount stated in the contract.

The Electric Light plant is now in operation at the Upper Pumping Station. The engine and boiler at the Station are in good repair, and have performed satisfactory service during the year.

NEW RESERVOIR.

The plans and specifications as prepared, meeting with the approval of the Common Council, the work was advertised for and the contract awarded to O'Brien & Clark, of New York City, for \$3,34,502.30, they being the lowest bidders.

The amount expended during the year has been as follows:

Paid Contractor on contracts	. \$	81,000.00
For cast-iron pipes and special valves for Inlets .		13,730.15
Damages	4	315.00
Engineering and Stationery		2,049.90
		-
Total	. 5	\$97,095.05

The reservoir is to be completed by December 1, 1891.

THE NEW THIRTY-SIX-INCH MAIN.

The easterly half of the 36-inch main from the Engine House to East Buffalo, has been completed, the entire cost of the work being met by the issue of bonds.

The cost of the line has been as follows:

Year.	Length Laid.	Total Cost.	Amount of Bonds Appropriated.	Cost under Appropriation.
1888	12,520 feet.	\$116,885.70	\$150,000.00	\$33,114.30
1889	13,244 feet.	115,798.65	125,000.00	9,201.35
Total	, 25,764 feet.	\$232,684.35	\$275,000.00	\$42,315.65

DISTRIBUTION.

Pipe.—There was laid twenty-six miles and 4,889 feet of pipe of various sizes, at a cost of \$267,169.68, making the total amount of pipe in the City, 277 miles and 1,877 feet.

As soon as the new engine was accepted, about twelve miles of pipe was transferred from the reservoir supply to that of the high service, in the Eastern part of the City.

Services.—There were placed in the pipes 3,502 additional taps, making the total number 36,161.

Hydrants.—There were 164 hydrants placed on new lines of pipes, making the total number in use for fire purposes 2,408.

Valves.—The number of new valves placed on new mains were 406.

Meters.—There are one hundred and fifteen meters and twenty-eight hydraulic elevators in use. The amount of water used by meter measurement was 2,026,357,000 gallons. The amount of water used by hydraulic elevators was 76,597.000 gallons. The amount paid for water by meters was \$60,790.71, and for hydraulic elevators \$4.595.82, the total amount being \$65,386.51. The expense of maintaining the meters was \$427.24.

REVENUE.

The total amount received during the year was \$542,952.35.

WATER PUMPED AND REVENUE RECEIVED AND EXPENDITURES.

On account of the unusual wet summer and mild winter the pumpage has not increased as rapidly as in former years. The

following will show the amount of water pumped and the revenue received:

From 3 cent meter rates,	
per 1,000 galls 2,026,357,000 galls.	\$60,790,71
From hydraulic elevator,	
per 1,000 galls., 6 cents 76,597,000 galls.	4,595.82
From all other sources 31/4	
cents per 1,000 galls 14,348,293,645 galls.	467,566.82
Received for pipe laying	
from private parties	10,000.00
	-

Being an average of 45,071,911 gallons per day, or 173 gallons per head of population.

The expense of running the department was \$145,822.98. The cost of pumping per 1,000 gallons was less than one cent, and including the interest on the bonds, was less than two cents per 1,000 gallons.

The Revenue collected was expended as follows:

For operating the Department	172,691.74
Total	\$542,052.35

To meet all the demands made upon the Departments for water-pipe, would require about \$500,000 per year, for the next three years; having about half of the amount at our disposal each year necessitates many delays and annoyances.

RECOMMENDATIONS.

I would renew my recommendation of last year in reference to the Inlet Pier, the Bird Island Pier, and the Prevention of waste of water.

LOUIS H. KNAPP,

Superintendent and Engineer.

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REPORT

OF THE

REGISTRAR

FOR

1889.



REGISTRAR'S OFFICE.

Buffalo, January 1, 1890.

To Louis P. Reichert, James Ryan and S. K. Worthington, Water Commissioners:

Gentlemen—In compliance with the requirements of your Honorable Body, I have the honor to herewith submit my report for the year ending December 31, 1889.

The total receipts and disbursements for the year were as follows:

RECEIPTS.

RECEIF 15.	
Cash on hand January 1, 1889	\$139,973 48
Cash Receipts for year, Water Rates, etc	542,952.35
Issue of Bonds by authority of Act of the Legislature,	
Chapter 182 of the Laws of 1888	225,000.00
Premiums on above Bonds	36,888.75
Warrants drawn in 1888, cancelled in 1889	580.54
DISBURS EMENT S.	\$944,495.1 <i>2</i>
Interest on Water Bonds	\$172,691.74
Maintenance and Repairs	145,822 98
Improvements and Extensions	498,529.24
Frontage Tax refunded by order of Council	226.32
Cash on hand January 1, 1890	127,224.84
	\$944,495.1 <i>2</i>

DODGE FARM RESERVOIR.

RECEIPTS.

Bonds issued under authority of Act of the Legislature, Chapter 601 of the Laws of 1873 Premium on same	\$ 100,000.00 56,171.00
disbursements.	\$156,171.00
Paid Contractors on account Contract Other Expenses	\$ 81,000.00 16,095.05 59,075.95
The cash balance on hand January 1, 1890, of g made up of items included in the estimates of r expended, viz.:	
Due Holly Mfg. Co. on account Engine No. 6 Due other Contractors	\$ 18,250.00 2,000.00 73,614.62
The amount of 1889 appropriation unexpended, the cost of the work laid out for the year being less than estimated expense therefor	\$ 93,864.62
	\$127,224.84

The total receipts for water, etc., for the year, not including issue of bonds as authorized for a	
specific purpose, was	\$542,952.35
This is an increase over the previous year of	
The following itemized statement shows source	
viz.:	
Water for City purposes	\$100,000.00
From Domestic Consumers and Mfrs. not metered	352,061.84
" Manufacturers and Railroads, metered	65,386.51
" Builders	2,725.88
" Corporation Cocks	7,084.50
" Rent of Dodge Farm	30.00
" Street Sprinkling	1,640.12
" Turn-on Fees	309.00
" Circus	30.00
" Street Paving	844.40
" New Boxes	48.00
" Plumbers' Licenses	880.00
" Tapping Fines	9.00
" Flushing Sewers	100.75
FROM SALE OF OLD MATERIAL.	
Jan. 15, C. Kobenus 1 horse (old Jack) \$ 60.0	ю
" 18, J. McQuade 1 sorrel horse 100.0	0
" 30, Geo. Schneider . old lathe and stud-	
ding 5	0
Feb. 2, M. Lichtenstein, old brass, 1,025	
lbs. at 8c., \$82,00;	
lead skimmings,	
825 lbs. at 1 ½c.,	
\$12.37; wrought	
scrap, 1,450 lbs.	
at \$12.00, \$8.70. 102.0	7
	•

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Feb. 28, J. B. Staley . . 1 bay mare . . . $ 7000
April 15, Frank Lanahan, three Worthington
                           boilers with at-
                           tachments, less
                            grate bars . . .
                                              335.00
June
       1, H. Diebold . old
                                 house
                            Dodge Farm . .
                                               17.00
       3, Horton & Len-
              ahen . . .
                          old iron pipe, 6070
                           lbs. at 40c.,$26.80;
                            old iron 21/2 x 3/8
                            15,950 lbs.
                            75c., $119.63..
                                              146.43
       3, O'Brien & Clark, old building, 287
                            Best street (at
                            auction) . . . . 235.00
       3, C. Hagmeyer . old buildg. on Jeff.
                            at auction . . .
                                               25.00
      11, M. Sweeney . . old buildg. on Jeff.
                            at auction. . .
                                             100.00
July
       2, M. Stetson . . . 1 smoke stack . .
                                               15.00
      16, Star Oil Co. . . 36 empty oil brls..
                                               28 oo
 **
      18, M. K. Hopkins, 50 lbs. old iron . .
                                                 .25
      30, Henry Metzger, manure for 1 year,
                            Sept. 1, 1888, to
                            Sept. 1, 1889...
                                               12.00
Aug.
       8, M. Lichtenstein, 3,200 lbs. lead
                            skimmings at 1 1/4
                                               40.00
      13, Buffalo Cast Iron
           Pipe Co. . . 1 36-inch pipe 981
                            =4630 at $27.50
                                              63.66
     26, Aug. Gisel . . . I hydt. nozzle . .
                                                1.00
```

Sept.	19, Mr. McCrea 4 wagon wheels . \$ 5.00
**	23, Buffalo Cast Iron
	Pipe Co 73,120 lbs. scrap iron(cast)at 11.00 402.16
Nov.	11, D. Ullman 690 lbs. old hose
	at 10c. per 100 lbs 69
**	16, Mr. Metzger manure to Nov. 1, 1889 6.00
"	13, Buffalo Cast Iron .
	Pipe Co 1 12-inch pipe re-
	turned 232-820
	lbs. at \$27.50 11.27
"	20, M. Lichtenstein, 2,680 lbs. lead
	skimmings at 1 ½;
	1,280 lbs. wrt.
	scrap at \$12.00;
	495 lbs. brass at
	74c.; 590 lbs. old
	rope at $0\frac{1}{4}$ c 84.00
Dec.	9, D. Ullman 170 lbs. old rub-
	ber at 3c.; 132
	lbs. old brass at
	9c 17.10
"	12, L. H. Knapp . 1 bale straw, 130
	ibs
"	31, Star Oil Co 20 empty oil bls. at
	75c 15.00
44	31, M. Lichtenstein, 1,080 lbs. scrap
	iron at \$12.00. 6.48

TWENTY-FIRST ANNUAL REPORT OF 28 Dec. 31, M. Lichtenstein, 5,390 lbs. lead skimmings at 1 ¼ c., \$67.37; 255 lbs. old brass, \$17.85 \$ 85.22 FROM LABOR AND SUPPLIES. Jan. 7, C. Richardson . labor. \$ 28, Lake S. & M. S. R. R. Co. . setting water metr. 338.60 Feb. 14, W. N. Y. & P. R.R. Co. . . . repairs Louisiana and Exchange streets.... 20.40 18, T. Battles... relaying water main corner Davis and Jefferson streets. 11.94 15, M. M. Granger, running 4-in. supply to mill Jefferson, north of Ferry street. . . 59.50 Mar. 5, Hingston and Woods labor and material plugging water main, cor. of Seneca and Troupe streets..... 17.80 11, Holly Mfg. Co., pipe and sundries 7, Reuling's P. Mill, running 4-in. sup-

ply to mill on Lord street for 769 Clinton st. .

April	4, J. C. Kingston. fire supply to No.
-	35 Henry street. \$ 52.49
"	8, N. Y. C. & H.
	R. R. Co setting 4-in. crown
	meter, cor. Chica-
	go and Exchange
	streets 69.55
"	19, O. Glenn difference between
	$\frac{1}{2}$ and $\frac{5}{6}$ taps50
"	25, N. Y. C. & H.
	R. R. Co labor and material
	setting 2-in. union
	meter Bailey ave. 99 84
44	29, McConnell and
	Williams labor and material
	repairing main at
	Erie crossing,
	Main street 7.50
May	13, Laub & Zeller, running 4-in. sup-
	ply into tannery . 49.19
-"	5, Louis H. Knapp 1 ½ day's labor . 2.25
June	18, Geo. B. Hayes, changing water
	supply, No. 228
66	Washington st 19.93
"	24, Evans Elevator, moving hydrant . 5.20
••	25, Buffalo Car Mg.
"	Co labor and material 28.15
•	25, Barber Asphalt, plugging main on
"	Gelston street . 5.25
•	27, Jewett Estate . extending 6-inch water main in
	Crescent ave 1448.78
	Crescent ave 1440.70

on hydts. in park 127.92

Dec.	10, Lehigh Valley
	R. R. Co laying water main
	in Dingens st.,
	as per contract, \$4,519.64
**	16, J. D. Larkin putting in fire sup-
	ply, No. 659 Sen-
	eca street 39.09
"	21, Irlbacker and
	Davis supplies 29.63
44	21, Irlbacker and
	Davis supplies 4.89
•6	21, Hingston and
	Woods labor and supplies. 31.11
" .	21, F. M. Loomis. supplies 185.51
64	21, D. McConnell. labor and supplies. 7.18
"	23, Buffalo Street
	R. R. Co setting 6-in. valve,
	corner Allen and
	Mariner 32.03
"	23, Hersee Fur. Co., labor and supplies,
41	Blossom alley 31.33
••	23, Coatsworth &
	Eddy labor and supplies,
44	956 Seneca street 33.79
••	23, Alex. Brush. labor and material,
	connection for
"	new street 77.53
••	24, W. H. Johnson, labor and material,
	Ply. ave. M. E.
44	church 43.16
••	27, Wm. Franklin . labor and material,
	plugging main in
	Grant street 3.75

TWENTY-FIRST ANNUAL REPORT OF 32 Dec. 27, Olson & Franklin labor and material, Breckenridge and Herkiner streets . \$ 11.37 27, Olson & Franklin labor and material. 100.00 28, Jewett Estate. laying mains as per contract: Parkside ave. . \$385-55 Oakwood place . 695.87 Greenfield street . 216.27 -1,297.69 28, Geo. Martin . . 1-5% Corp. cock (extra) . . . 2.50 31, Matt Good . . repairing broken pipe. 31, American Express Co. . . labor and material. 31, German R. C. Orphan Asyl., laying pipe in Dodge street . . 282.05 --- 9817.80

The following balance sheet gives the exact standing of the various accounts at close of the year; and shows fully the expense incurred in each and every branch of the department; all items of purchase, wages, etc., being carefully divided and posted to an account under its proper classification:

BALANCE SHEET, BUFFALO CITY WATER WORKS, DEC. 31, 1890.

2.	Buffalo City Water Works		
	Construction	584,382.00	
3.	Buffalo City Water Works		
_	Extension Fund	1,382,733.00	
4.	Bonds Payable		\$3,110,882.00
5.	City Treasurer	139,073.48	
6.	Hydrant and Water Fund		1,665,307.18
7.	Buffalo City Water Works		
	Extension Loan	272,000.00	
8.	Extension Acct., 1889		
9.	Hydrant and Water, 1889		
IO.	Redemption Bonds, Sinking		
	Fund		50,000.00
16.	Supply Account		741,673.59
33.	Store-House	6,890.31	
60.	Pipe and Specials	11,109.58	
86.	Lead Account		1,076.40
107.	General Street Repairs	8,777.25	
129.	Labor Trench Account	2,136.26	
140.	Labor Store-House	1,086.51	
142.	Meter Repairs	427.24	
144.	Valve Repairs	664.34	
149.	Hydrant Repairs	5,347.11	
169.	Store-Keeper	. 900.00	
170.	Dredge Inspector	35.00	

TWENTY-FIRST ANNUAL REPORT OF

171.	Timekeeper	1,099.93
172.	Salaries	15,785.64
173.	Inspectors	10,777.51
174.	Tapping	2, 128.75
175.	Hostler and Assistant	1,472.41
176.	Watchman, Store-House	674.25
177.	Teamsters	1,071.44
178.	Engineers, Upper Engine	
	House	2,711.02
179.	House	
	House	1,197.15
180.	Oilers, Wipers and Laborers,	
	Upper Engine House	1,774.00
181.	Engineers, Lower Engine	
	House	4,638.86
182.	Firemen, Lower Engine	
	House	6,952.11
183.	Oilers, Wipers and Laborers,	8 ,5 74.51
185.	Dodge Farm Reservoir	97,095.05
198.	Prospect Reservoir and Keep-	
	ers	1,124.13
200.	Pipe Inspector	780.00
201.	New Maps	1,366.90
203.	Louis P. Reichert	1,200.00
204.	James Ryan	1,800.00
205.	S. K. Worthington	1,200.00
206.	Clerk	900.00
207.	Service Leaks	550.51
210.	Joint Leaks	1,197.01
214.	Repairs of Free Hydrants,	
	Fountains and Horse	
	Troughs	548.02
216.	Fuel	59,565.43

217.	Repairs Tools, Store-House. \$	12.25
218.	Repairs Building, Lower En-	
	gine House	502.52
219.	Feed	1,095.48
222.	Veterinary	84.00
223.	Horses Purchased	500.00
224.	Stable Supplies	204.61
225.	Harness Repairs	157.95
227.	Wagon and Sleigh Repairs.	678.15
228.	Wagon and Sleighs purchased	110.00
230	Repairs Store-House Building	19.99
231.	New Tools, Store-House	305.76
2 34.	Office Expenses, Printing, etc.	2,106 48
236.	Advertising	365.68
237.	Corporation Cocks and Ser-	
	vices	1,015.19
238.	Fire Hydrant and Protection	3,612.34
239.	Street Reservoir	134.25
2 40.	Blacksmith Shop, Upper En-	
	gine House	1,574.02
242.	Repairs of Tools, Upper En-	
	gine House	1.50
244.	Supplies, Upper Engine	
	House	412.64
248.	Supplies, Lower Engine	
	House	2,857.83
256.	New Tools, Lower Engine	
	House	126.75
257.	Repair of Tools, Lower En-	
	gine House	63.05
258.	General Repairs Machinery,	
	Upper Engine House	268.59

844.40

Street Paving.

TWENTY-FIRST ANNUAL REPORT OF

381.	New Boxes		\$ 48.00
382.	Plumbers' License		880.00
383.	Tapping Fines		9.00
384.	Flushing		100.75.
385.	New Reservoir Buildings		377.00
38 <i>7</i> .	New Buildings, Lower En-		3/7.00
307.	gine House	£ 57.408.47	
401.	New Gaskel Pumping Engine,	, 57,400.47	
40	No. 5, Lower Eng. House.	19,750.00	
401.	Addition to S. Boiler House,	- 3,7 50.00	
4	Lower Engine House	2,024.92	
402.	Rent of Bell Telephone	300.00	
402.	Meters Purchased	1,269.00	
403.	New Gaskell Pumping Engine,		
	No. 6, Lower Eng. House.	70,008.50	
403.	Improvements, Upper Engine		
	House	157.50	
404.	Marine Boilers, Lower Engine		
	House	1,062.00	
405.	Testing Engine No. 5	40.70	
405.	Accident Account	594.81	
406.	New Horse Troughs	435.29	
406.	South Coal Hoist, No. 3	322.64	
408.	Construction New Tunnel,		
	Conduit and Pump Well .	31,833.30	
408.	Inspector of New Buildings .	45200	
409.	Delivering Bills, Extra Help.	1,887.70	
409.	Covering Hydrants	892.02	
521.	Wilson Street	2,118.27	
521.	Highland Avenue	1,873.06	
521.	Highland Avenue	524.18	
522.	Summer Street	261.25	

522.	Union Place	194.46
522.	Glenwood Avenue	205.64
523.	Babcock Street	2,222.06
523.	Cleveland Street	455.58
523.	Northampton	986.76
524.	Vincennes	163.00
524.	Vincennes	215.81
524.	Alabama	279.71
525.	Elmwood Avenue	5 16.7 7
525.	Perkins Place	407.26
525.	West Parade	498.65
526.	Armbruster Street	584.72
526	Hirschbeck Street	828.95
526.	East Parade Street	1,603.49
527.	North Parade Street	489.08
527.	Puerner Avenue	3,298.99
527.	Davy Street	725.99
528.	Jones Street	683.09
528.	Virginia Street	1,793.9 5
528.	Metcalfe Street	275.30
52 9.	Klaus Street	115.34
529.	Clemo Street	252.76
529.	East Summer Street	808.12
530.	East North Street	378.77
530.	East North Street	538.23
530.	Waverly Street	1,162.90
531.	Summer Avenue	832.31
531.	Brinkman Street	817.86
531.	Laux Street	641.31
532.	Scoville Street	913.28
532.	Bushnell Street	370.03
532.	Emily Street	589.17

TWENTY-FIRST ANNUAL REPORT OF Breckenridge Street . . . 313.34 533. Grant Street..., ... 1,813.34 533. Durrenberger Place . . . 329.84 533. Efner Street 298.53. 534. Orlando Street 140.63 534 Kingsley Street 534 1,117.19 Lovejoy Street 535. 304.57 Humboldt Parkway . . . 535. 790.79 535. Norton Street 167.38 Rieman Street 5 36. 558.55 536. Gilbert Street. 757.39 536. Baitz Avenue 997-99 Oneida Street 537. 238.30 Virginia Street 537. 2,451.71 Sycamore Street. 28,118.21 537. Auburn Avenue. 538. 3,349.08 538. Winona Street 370.05 Sears Street 539. 486.56 Shepard Street 752.70 539. Gatchell Street. 539. 920.53 Latour Street 540. 380.85 Kiefer Street. 540. 409.76 Rohr Avenue 540. 553.04 541. 429.19 Marshall Street 798.09 541. Bardol Street 541. 274.33 Seneca Street 542. 3,523.13. Curtis Street 1,202.26 542. Concord Street 542. 414.62 Newton Street 543. 529.85 Benzinger Street. 543. 554-35

St. Stephen's Place

404.04

High Street

Newell Street

554.

554

295.26

360.42

TWENTY-FIRST ANNUAL REPORT OF

554.	Annie Place	\$ 316.62
555.	Annie Place	602.51
555-	Parkside Avenue	385.55
555-	Oakwood Place	695.8 <i>7</i>
556.	Greenfield Street	216.27
556.	Prenatt Street	190.95
556.	Owahn Place	506.50
55 <i>7</i> •	Cleveland Aveuue	766.13
55 <i>7</i> .	Roherer Avenue	5 05 .74
557·	Dupont Street	640.95
558.	Scott Street	56.51
558.	Pratt Street	8,375.69
558.	Broadway Street	3032.69
559.	Spring Street	5,922.66
559.	Peckham Street	43,793.21
559.	Elm Street	26,061.18
560.	Eagle Street	650.83
5 6 0.	Abbott Road	1,11465
560.	Washington Street	1,674.59
561.	South Division Street	3,115.48
561.	Perry Street	2,598.17
561.	Perry Street	1,291.83
562.	Tonawanda Street	468.09
562.	Tonawanda Street	2,831.08
562.	Clinton Street	7,569.69
563.	Clinton Street	2,052.51
563.	Playter Street	1,238.02
563.	Logan Street	287.53
564.	Dingens Street	4,757.62
564.	Elsie Place	185.51
564.	Sherman Street	13,300.60
565.	Swan Street	718.30

565.	Franklin Street	\$ 1,880.48
565.	Loepere Street	1,271 50
566.	Crescent Street	1,448. <i>7</i> 8
566.	Dodge Street	2 82.05
566.	Amherst Street	7.337,43
567.	Gas Account	1,230.36
567.	Frontage Tax	2 2 6. 3 2

\$6,124.305.24 \$6,124,305.24

TRIAL BALANCE, BUFFALO CITY WATER WORKS, JANUARY I, 1890.

All the accounts in foregoing balance sheet being closed to the following one, under their proper heading.

	,, r-F	
2.	Buffalo City Water Works	
	Construction	5 584,382.00
3.	Buffalo City Water Works	-
	Extension Fund	1,463,203.18
4.	Bonds Payable	\$3,435,882.00
5.	City Treasurer	186,300.79
6.	Hydrant and Water Fund	1,889,744.80
7.	Buffalo City Water Works	
	Extension Loan	3,044,419.46
10.	Redemption Bonds Sinking	
	Fund	50,000.00
II.	Dodge Farm Reservoir Con-	
	struction Account	9 ,70 95.0 5
12.	Frontage Tax Rebate Account	226.32

\$5,375,626.80 \$5,375,626.80

COST OF WATER WORKS FROM PURCHASE TO DATE.

Original Purchase	705,000.00
Dodge Farm and other Property	
Extensions and Improvements4	
Interest on Bonds	,494,729.94
Maintenance and Repairs	,831,927.68
Dodge Farm Reservoir	97,095 05
Cash on hand General Account 127,224.84 Jan 1, 1890. Dodge Farm 59,075.95	186,300.79
Total	,346,878.65
•	
RECEIPTS.	

Water Rates	•										\$5,874,324.38
Bonds											3,685,882.00
Premium on	В	on	ds								93,059 75
Taxes										•	1,693,612.52

PRESENT STANDING OF WATER WORKS ACCOUNT.

	Jan. 1, 1889.	Added during the year.	Jan. 1, 1890.
Original purchase	\$705,000.00		\$705,000.00
Real Estate, including Taxes	110,826.14	!	110,826.14
Engines	240,998.58	1	240,998.55
Holly Pumping House	12,092.25		12,092.25
Holly Pumping Machinery	41,307.41		41,307.41
New Engine House	86,478.34		86,478.34
Gas Well	9,406.44		9,406.44
Inlet Pier and Tunnel	555,175.53		555,175.53
Main Pipes, Branches, Hydrants, etc		\$310,812.14	3,508,208.68
Coal and Boiler House and Chimney	26,711.53		26,711.53
Gaskill Engine, No. 4	94,892.44		94,892.44
Coal Tunnel connecting Upper and Lower House	33,51.19	! !	4,524.53
New Valve House	910.70		910.70
Overhead Crossing	1,447.87	'	1,447.87
New Boiler House	8,497.19	1	8,497.19
Electric Light Plant	3,687.24		3,687.24
Repairs, Boilers, and moving same	5,417.65	1	5,417.65
New Cylinder Boilers	5,000.00		5,000.00
New Buildings	37,733.88	62,354.55	100,088.43
Ice Elevators	1,263.94		1,737.98
New Reservoir	2,472.15	97,095.05	99,567.20
Gaskill Engine, No. 5	75,000.00	19,750.00	94,750.00
Electric Light and Telephone Cables to Inlet Pier	1,330.30		1,330.30
R. R. Tracks, L. P. S	1	2,123.37	2,123.37
New Tunnel, Conduit and Pump Well.	1	31,833.30	
Gaskell Engine, No. 6		70,008.50	70,008.50
Total,	\$5,226,397.31	\$595,624.29	\$5,822,021.60

WATER BONDS.

Bonds outstanding December 31, 1889, issued for the purchase, extension and improvement of the Water Works.

	1	Date of	1	ssu	e.				Rate of Interest,	Whe	en I	Due.	Amou	nt.
Jan.	ı,	1871.							7	Jan.	I,	1890	- 50,0	000,000
Jan.		1871.							7	Jan.	I,	1891	100,0	00.00
Aug.	I,	1871.	2						. 7	Aug.	I,	1891	50,0	00.00
Oct.		1871.					٠.		7	Oct.	1,	1891	100,0	00.00
July	I,	1871.							7	July	I,	1890	100,0	00,000
Oct.	ı,	1872.							7	Oct.	I,	1892	100,0	00.00
Dec.		1872.							7	Dec.	I,	1892	100,0	00,00
Sept.	I,	1873.							7	Sept.	I,	1903	200,0	00.00
April		1874.							7	April	ı,	1905	100,0	00.00
July		1874.							7	July	1,	1906	100,0	00,00
Aug.		1874.			V			1	7	Aug.	1,	1908	100,0	00.00
Oct.		1874.							7	Oct.	T,	1908	79	82.00
Aug.		1875.			÷				7	Aug.		1909		00,00
Jan.	I,	1876.			í.				7	Jan.	I,	1896	50,0	00,00
July		1876.							6	July	I,	1896	100,0	00.00
Sept.	2,	1878.							5	Sept.	2,	1898	50,0	00.000
April	25,	1879.	·			٠,			5	April	25,	1898	100,0	00,00
April	26,	1880.							5	April	26,	1899	100,0	00.00
July	I,	1880.	i.				1		4	July	I,	1904	50,0	00,00
Sept.	I,	1880.	á.			ŭ,			4	Sept.	I,	1904	100,0	00.00
Nov.	26,	1880.							4	Nov.	26,	1897	64,0	00.00
April	25,	1881.							4	April	25,	1900	100,0	00,00
April	Ĩ,	1884.							4	April	1,	1901	90,0	00.00
July	1,	1885.							31/2	July	I,	1905	100,0	00,00
Oct.	I,	1886.			į.				31/2	Oct.	I,	1903	100,0	00.00
Marc	h I,	1887.						4	31/2	Marc	h I,	1906	100,0	00.00
April	I,	1887.							31/2	April	1,	1906	50,0	00,00
June	1,	1888.							31/2	June	1,	1902	100,0	00.00
June	15,	1888.							31/2	June	15,	1908	57,5	00.00
June	15,	1888.							31/2	June	15,	1914	275,0	00.00
		1888.			Ġ.				31/2	Dec.	1,	1909	100,0	00,000
May	I,	1889.		•					31/2	May	I,	1919	225,0	00.00
Aug.	I,	1889.		÷					7	Aug.	I,	1909	100,0	00.00
Oct.	I,	1889.			٠				31/2	Oct.	I,	1909	145,0	00,00
Т	otal	outst	ar	di	ng								\$3,435,8	82.00

INTEREST PAID ON WATER BONDS DURING 1889.

January 28th.										\$ 8,750.00
February 18th										12,000.00
March 18th .										29,778.37
April 22d										1,280.00
May 20th										12,818.75
June 17th										19,750.00
July 22nd										20,75000
September 23r	d.									29,778.37
October 21st.										5,217.00
November 18th	ı.									12,818.75
December 23rd	d.					•	•			19,750.50

\$172,691.74

COMPARATIVE STATEMENT.

Revenue received, coal consumed and water pumped annually for eighteen years.

		Maintenance	Const		Water Daniel	The same of	d	Pipe,	Each	Each Year.
Year.	Revenue.	and Repairs,	Consumed, Tons.	Water Pumped, Gallons,	Dally, Gallons,	and Improvements.	Miles,	Feet,	Miles,	Feet,
1871.	\$124,865.00	\$77,456.95	3,645	2,775,752,490	7,604,801	284,297.84	67	4,644	1:	1:
872 .	138,150.00	69,228.74	4,546	3,226,891,140	8,840,797	355,492.46	77	2,921	6	3,557
873 .	168,267.20	77,747.60	4,720	3,329,193,162	9,316,598	308,600.46	81	4,912	4	166,1
874 .	176,219.10	66,218.50	2,852.50	3,040,012,107	8,509,481	307,355.64	98	4,905	4	5,273
875	184,516.48	64,862.37	3,422.67	3,828,594,027	10,489,298	159,098.75	16	1,591	4	1,966
876 .	191,335.84	61,474.22	3,357.88	4,020,936,278	11,016,263	106,900.21	92	4,931	-	3,340
877 .	189,296.90	57,553.27	3,249	4,267,218,162	181,169,11	17,014.05	93	2,631		2,980
878 .	200,183.28	55,230.50	3,524.50	4,589,879,986	12,503,078	48.555.32	94	3,376	-	745
. 678	205,415.75	54,497.22	3,979.75	5,291,337,520	14,496,815	11,457.50	6	626	61	2,530
880 .	216,214.37	60,983.67	5,809	5,993,009,343	16,369,802	161,883.89	102	873	20	247
. 188	210,031.46	76,629 09	7,192.80	6,344,182,224	17,394,973	201,487.10	114	4,149	12	3,27
882 .	362,762.07	79,105.90	* 40 × ×	7,076,212,870	19,386,885	160,617.81	131	524	91	1,65
883 .	426,353-57	87,193.53	8,811	8,568,435,200	23,475,192	200,029.90	150	529	18	5,13
884 .	381,581.64	81,078.88	9,128	8,789,971,200	24,082,112	186,623.92	164	2,931	14	2,40
885	444,440.77	92,438.30	10,503	10,441,393,340	28,606,557	327,918.82	161	830	27	1,47
. 980	477,209.57	95,031.04	11,280	12,069,882,676	33,068,172	342,493.57	213	1,218	22	388
887 .	476,411.87	127,065.25	11,374	14,033,297,522	38,484,936	209,542.10	232	2,245	21	2,780
. 888	494,777.52	143,125.76	12,318†	15,545,365,450	42,590,042	428,505.68	252	403	21#	1,25
. 688	542,052.35	145.822.08	7.5527	16.451.247.645	ACONTONE	202 624 20	277	1 877	990	4 880

This includes one mile, 3,415 feet of large mains laid to replace small ones.
 There was used of natural gas as fuel the equivalent of 3,288 tons coal.
 There was used of natural gas as fuel the equivalent of 8,427 tons coal, costing \$31,603.03.

SCHEDULE OF BILLS AND ACCOUNTS.

Approved during the Year 1889 by the Water Board and Paid by the City Treasurer.

IMPROVEMENTS AND EXTENSIONS.

Dat	·.	Name.		Descri	ption.	Amount.
Jan.	28, Buff. C	ast-Iron I	Pipe Co.	Cast-iron	pipe and	
					astings\$	5,548.18
"	Buff. C	ast-Iron I	Pipe Co.		pipe and	
	- 44 -			-	astings	3,798.00
"	Buff. C	ast-Iron 1	Pipe Co.		pipe and	
"	D 66 C		v: G	•	astings	338.65
••	Buff. C	ast-Iron F	'ipe Co.		pipe and	
"	n « c		·	•	astings	146.17
••	Bun. C	ast-iron P	ipe Co.		pipe and	
"	pc C	I T	ina Ca		astings	4,200.51
•	Bun. C	ast-fron r	ipe Co.		pipe and	
41	Buff C	et-Iron P	ine Co	-	astings pipe and	3,101.31
	Dull. Ca	130-11011 1	ipe Co.		castings	1 270 16
•6	Buff C	ast-Iron F	Pine Co	-	pipe and	3,379.56
	Duii. O	11011 1	.рс со.		astings	3,779.90
"	Buff. C	ast-Iron H	Pipe Co.	-	pipe and	3,779.90
					astings	3,803.41
"	Fillmo	re Ave. Fo	oun. Co.	Grate Bar	_	52.56
46		ws, Nort				3 3
	Co			50 copies	spec. for	
				new re	eservoir .	40.00

		•
-	28, Peter G. Straub	
"	D. Lund	=
"	Jno. C. Post	
"	A. L. Barber	
. "	A. P. Kehr & Co	, ,
. "	F. B. Gallagher, Cash'r,	
Feb.	18, John Druar	•
		for constructing
		new chimney 1,000.00
"	25, Bott & Hughes	
46	C. J. Hamilton	
"	Howard Iron Works.	
"	Geo. V. Goll	
"	W. H. Arthur	
"	D. J. Stickney	· · · · · · · · · · · · · · · · · · ·
"	Beals & Brown	
"	S. D. Colie	
46	F. B. Gallagher, Cash'r,	Pay roll, February. 1,725.57
."	Holly M'f'g Co., Lock-	
•	port, N. Y	
	•	new Gaskell Eng. 10,000.00
Mar.	11, The Buffalo Rubber Co.	
"	James Boland	
"	Felthousen & Russell.	•
"	James Boland . :	
"	James Boland	7 2 23
• 6		
	C. J. Frank	
	•	handles 44.17
".	Buff. Cast-Iron Pipe Co.	handles
"	Buff. Cast-Iron Pipe Co. Buff. Cast-Iron Pipe Co.	handles 44.17 Pipe 121.88 Pipe 187.95
	Buff. Cast-Iron Pipe Co. Buff. Cast-Iron Pipe Co. Buff. Cast-Iron Pipe Co.	handles
"	Buff. Cast-Iron Pipe Co. Buff. Cast-Iron Pipe Co.	handles

Valentine & Son. . . Keys and etc. . . .

	April	8, Buff. Cast-Iron Pipe Co. Pipe	3,526.63
	**	Buff. Cast-Iron Pipe Co. Pipe	1,320.81
	. "	Buff. Cast-Iron Pipe Co. Pipe	3,820.03
	"	Buff, Cast-Iron Pipe Co. Pipe	531.05
	64.	Buff. Cast-Iron Pipe Co. Pipe	3,944.81
	**	Buff. Cast-Iron Pipe Co. Pipe	408.36
	16	James Boland Final payment on	-
		contract for build'g	
		new boiler house.	164.00
	.66	Chicago and Aurora	1000
		Smelt'g and Refining. Pig lead	6,904.34
	April	15, F. B. Gallagher, Cash'r, Wages, laborers'	200
		w'k end'g April 13.	287.50
	66	James Boland Mason work	226,90
	**	C. J. Hamilton Lumber	9.00
	"	Geo. E. Matthews & Co. Advertising	5-47
	16	Swift & Stambach Gasoline	3.00
,	April	22, Weed & Co Hardware	4.28
	"	James Boland Mason work	8.25
	"	Jno. C. Post Paint	1.97
	"	Walbridge & Co Nails, hasps, etc	3.61
	66	The Times Advertising	35.00
	**	E. H. Butler Advertising	14.25
	**	A. T. Lytle Oats	90.02
	- 66	Beals & Brown Hardware	4.85
	44	S. D. Colie Lumber	85.62
	"	Barber Asph't P'v'g Co. Repairing pavement.	43.60
	"	Scatcherd & Son Oak lumber	48.72
	**	Adams & White Stationery	21.20
	"	E. H. Butler Advertising	14.62
	"	Howard Iron Works . Bolted branch, etc	60.00

April	22, F. B. Gallagher, Cash'r, Wages, laborers'	
	weeks ending April	
	20th and April 27th	\$3,147.03
**	F. B. Gallagher, Cash'r. Pay roll, April	1,749.06
"	Ludlow Valve M'f'g Co. Paid on valve cont't.	4,899.59
May	6, F. B. Gallagher, Cash'r. Wages, laborers'	1000000
	w'k ending May 4.	2,005.49
***	T. Jackson & Son,	3000
	Reading, Pa Packing	365.52
**	Jas. D. Warrens' Sons. Advertising	26.50
a	Buffalo Democrat Advertising	25.75
- 16	Fries & Co Meter repairs	21.20
- 16	W. A. Case & Son Pipe fit'gs and labor.	457-55
May	13, F. B. Gallagher, Cash'r, Wages, laborers'	
-	w'k ending May 11	2,353.11
11	Jno. Druar Mason work	1,024.92
**	Bott & Hughes Painting	275.00
u	C. J. Hamilton Lumber	22.42
**	Hass & Klein Bl'k b'ks and bind'g.	37.00
"	Buffalo Gas. Light Co. Coke	15.00
***	S. D. Colie Lumber	370.83
May	20, Whittet, Barrett & Co. White waste	18.88
"	Russell & Watson Cups and wicking .	1.75
**	Otto Ulbrich Tracing cloth	9.00
- 11	Walbridge & Co Nails	9.53
	Jos. Bourgnan Charcoal	-75
te	E. L. Cook Fittings	20.00
.44	Matthews, Northrup &	
	Co Stationery	144.25
46	Bingham & Taylor Castings	215.88
**	Buff. Cast-Iron Pipe Co. Pipe	3.715.49
41	Buff. Cast-Iron Pipe Co. Pipe	3,932.50

TWENTY-PIRST ANNUAL REPORT OF

May	20, Buff. Cast-Iron Pipe Co. Pipe	1,123.19
	Buff. Cast-Iron Pipe Co. Pipe	
"	Buff. Cast-Iron Pipe Co. Pipe	117.99
66	Buff. Cast-Iron Pipe Co. Pipe	3,363.19
"	Buff. Cast-Iron Pipe Co. Pipe	285.86
"	Buff. Cast-Iron Pipe Co. Pipe	1,777.75
66	Buff. Cast-Iron Pipe Co. Pipe	17.57
	Buff. Cast-Iron Pipe Co. Pipe	785.60
"	Buff. Cast-Iron Pipe Co. Pipe	810.18
. "	F. B. Gallagher, Cash'r. Wages, laborers	
	w'k ending May 18	2,442.84
May	27, F. B. Gallagher, Cash'r, Pay roll, May	1,681.93
• "	F. B. Gallagher, Cash'r, Wages, laborers,	, ,,,
	w'k ending May 25	2,543.85
. "	James Boland Contract new build-	,,,,,,
	ings, L. E. H	2,000.00
46	Holly M'f'g Co., Lock-	
	port, N. Y Final payment on	*
	con't for new eng'e	9,750.00
June	3, F. B. Gallagher, Cash'r, Wages, laborers'	
	w'k ending June 1	1,631.65
June	10, Scatcherd & Son Oak lumber	2.16
"	Buffalo Rubber Co Hose	240.00
"	H. H. Baker & Co Ropes and blocks .	29.11
**	The Eddy Valve Co.,	
	Waterford, N. Y Stems for valves .	29.76
6.	Laycock Lumber Co Pine lumber	61.92
• 6	Laub & Zeller Leather	7.95
•6	J. V. Manar Hay	11.62
"	Irlbacker & Davis Fittings	10.00
June	3, Engineering News Pub.	
	Co Advertising	43.40

Time	a. I. D. Wassel's Con-	A describing	
June "	24, Jas. D. Warren's Sons .		
**	E. H. Butler		40.25
	The Buff. Brick Mfg.		
"	Co. Assn		14.00
**	J. J. McWilliams		9.50
	E. H. Butler		11.00
"	C. J. Hamilton		36.39
16	Smith, Falke & Co. · .	The state of the s	35.00
"	Warren Bryant	000	75 00
4	The Kellogg and Mc-		
	Dougall Lin'd Oil Co.	Linseed Oil ,	31.82
**	George V. Gull		15.50
**	James Boland	Mason work	75.00
186	Goodyear Rubber Co	Hose and packing.	22.25
44	Urban & Co	Feed	4.35
**	John Mesmer	Coach hire	6.50
66	Scatcherd & Son	Oak lumber	5 08
- 11	Jno. C. Post	Paint	2.30
**	O. W. Clarke & Son .		4.52
44	J. H. Ruckle & Co	Eng. and pump f'gs.	4.74
- 44	Howard Iron Works .		2,114.37
u	Bingham & Taylor		496.64
11		Mason work	146.25
11	James Boland		560.75
10	Star Oil Co		971
u	Walbridge & Co		40.87
16	F. B. Gallagher, Cash'r,		1,678.12
- ac	James Boland		-1-1-1-
	James Dolland 1	new buildings	4,000,00
July	I, F. B. Gallagher, Cash'r,		4,000,00
3,	i, i. D. Ganagner, Cash I,	w'k en'g June 29th	2,143.48
41	P. G. Straub	Paym't on contract	2,143.40
	1.0.000	for cut stone	300.00
		ior cut stone	300.00

July	15, E. H. Butler Advertising	\$ 40.25
**	Bingham & Taylor Castings	305.73
"	Star Oil Co Oil	10.30
66	Buffalo Storage and	
	Carting Co Hauling valves	40.00
**	C. J. Hamilton Lumber	74.48
**	H. Cherry Hay and pasture .	118.65
**	S. D. Colie Lumber	63.24
**	Ludlow Valve Man'f'g	
	Co., Troy, N. Y Valves	1,377.00
11	W. U. Telegraph Co Messages	15.33
**	Jno. Lyth & Sons Vit. Pipe	55.12
**	Becker & Wickser Harness repairs	70.65
**	J. H. Ruckle & Co Eng. and pump ftgs.	92.97
.16	Hardwick & Ware Fittings	28,56
**	The Pratt Hardware Co. Hardware	234-57
"	B. Cunningham Paym't on contract	
	for constg."tunnel"	2,500.00
***	F. B. Gallagher, Cash'r, Wages, laborers,'	
	w'k e'd'g July 15th	2,356.89
**	F. B. Gallagher, Cash'r, Paid for pig lead, as	
	per contract,	8,012.67
"	James Boland Paym't on contract	The same of
	for new buildings,	
	L. E. H	5,000.00
July	22, The Barber Asphalt	***************************************
	Paving Co Pavement repairs .	56.33
**	M. Riter., New smoke pipe	2 00
	and boiler repairs,	
	L. E. H	735.00
16	Scheeler & Son Riddle	.60
#	R. Hoffeld & Co Belting	111.83
		3

July	22, Jos. H. Rebstock	Trees and planting	\$ 90.00
,,	H. H. Baker & Co		7.75
July	15, Howard Iron Works .	-	
,,	Matthews, Northrup &	Gates:	2,275.00
	Co	Binding and print'g	6.00
July	22, Beals & Brown		51.27
,,	Whittet, Barrett & Co		131.12
"	E. L. Hedstrom		15.00
"	Hardwick & Ware		- 3.55
		Fittings	2.30
July	29, Jos. Churchyard		3
J J		bldgs., L.E.H	2,000.00
"	James Boland	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	•	new buildings .	3,500.00
44	F. B. Gallagher, Cash'r,	_	
		and inc'ls during	
		the adj't of Coun'l	10,000.00
**	B. Cunningham	Paid on account	
	_	bldg. new tunnel.	3,000.00
"	Ludlow Valve Man'f'g		
	Co	Paym't on contract	
		for valves	3,263. 6 0
46	F. B. Gallagher, Cash'r,	Wages of laborers,	
		w'k en'g July 27th	2,342.16
46	F. B. Gallagher, Cash'r,	Pay roll, July	1,674.97
4.6	Buff. Cast-Iron Pipe Co.	Pipe	2,246.81
"	Buff. Cast-Iron Pipe Co.	Pipe	478.64
44	Buff. Cast-Iron Pipe Co.	Pipe	2,761.24
"	Buff. Cast-Iron Pipe Co.	Pipe	56.50
"	Buff. Cast-Iron Pipe Co.	Pipe	1,904.91
• 6	Buff. Cast-Iron Pipe Co.	Pipe	371.44
"	Buff. Cast-Iron Pipe Co.	Pipe	1,914.56

July	29, Howard Iron Works .	•	
		branches	\$6,921.25
"	F.B. Gallagher, Cash'r,	Wages, laborers',	
		w'k en'dg July 20th	2,050.80
Aug.	30, J. H. Ruckel & Co		
46	James Mack	Sawdust	18.75
"	Robacher Disinfectant		
	Co., Rochester, N. Y.	Disinfectants	7.20
"	Ludlow Valve Man'fg		•
	Co., Troy, N. Y	Hubs and valves.	1,394.00
"	The Courier Co		42.00
"	Walbridge & Co	_	2.50
44	Urban & Co		2.60
"	Adams & White	Office supplies	13.80
66	French & Kirkholder .		16 25
"	Fries & Co		33.52
"	Cornell Lead Co	-	45.72
"	Cornell Lead Co	• •	
"	Buffalo Gas Light Co	• •	9.75
"	Jno. Lyth & Sons		
"	M. Riter	• •	12.20
**	Buffalo Storage and	,	
	Carting Co	Cartage	5 <i>7</i> .45
64	Plumb, Burdict & Barn-		37 13
	ard		55.40
66	The Barber Asphalt		33.40
	Paving Co		638.00
"	Brady & Maltby		90.00
"	Goodyear Rubber Co		
"	Hardwick & Ware		
"	Irlbacker & Davis		59.44
44			

Aug.	30, The Buffalo Mutual Gas		
	Light Co	Labor and material.	\$ 460.23
**	Leonard Hettrick, jr., .	Rep'g pavem'ts, etc.	2,360.38
- 66	F. B. Gallagher, Cash'r,	Wages, laborers,'	
		w'k end'g Sep. 7th.	1,288.25
.66	Peter G. Straub	Final payment on	
		cont't for cut stone.	486.58
- 15	Wm. Baynes	Cleaning streets	45.00
July	16, Chas. O. Willis	Manilla paper	8.40
Aug.	31, Otto Besser & Bro	Crayons, pencils, etc.	3.70
Aug.	9, Jno. Lyth & Sons	Pipe	38.50
July	24, Adams & White	Blank books, etc	54 80
July	29, Beals & Brown	Hardware	16.04
July	20, M. Riter	Boiler repairs, etc.	45.08
Aug.	5, Charles J. Heinold	Soap and oats	99.28
Aug.	19, Walbridge & Co	Brackets, oilers, etc.	21.28
Aug.	26, Williams & McConnell,		1,42.50
July	10, George V. Goll*		3.00
Aug.	22, The Barber Asphalt		
	Paving Co	Pavement repairs .	16.45
Aug.	18, C. H. Kellogg	Coal hoist	509.00
Aug.	27, Buffalo Sewer Pipe Co.	Pipe	53.25
Aug.	28, Bingham & Taylor		317.10
Aug.	17, Haas & Klein		12.50
Aug.	5, C. H. Kellogg		150.31
Feb.	19, Nat'l Meter Co., N. Y		967.00
July	12, Jacob Ginther	New horse troughs,	
		etc	207.26
Aug.	13, S. D. Colie		124.33
Aug.	29, Buffalo Gas Light Co		29.25
July	30, The Buffalo Mutual Gas		
	Light Co		13.55
July	31, The Buffalo Mutual Gas		
	Light Co	Labor and material.	12.81

	THE BUFFALO CITY	WATER WORKS.	63
Aug.	7, C. J. Hamilton	Lumber	\$ 29.48
July	26, C. H. Kellogg		375.98
Aug.	2, William Baynes	Cleaning streets	59.50
44.	William Baynes	Cleaning streets	91.50
July	1, Lockwood & Ough	Engineers' supplies	23.57
Aug.	10, Leonard Hettrich, jr.,	Repair'g pavement.	365.24
Sept.	23, F. B. Gallagher, cash'r,	Wages, laborers,'	
		w'k end'g Sep. 21st	1,158.95
- 11	James Boland		
		new b'd'gs, L.E.H.	3,000.00
-0	Buff. Cast-Iron Pipe Co.		213.85
"	Buff. Cast-Iron Pipe Co.		192.18
	Buff. Cast-Iron Pipe Co.		180.55
- 66	Buff. Cast-Iron Pipe Co.		376.94
44	Buff. Cast-Iron Pipe Co.	CONTRACTOR OF THE PARTY OF THE	4,798.08
-56	Buff. Cast-Iron Pipe Co.		126,33
**	Buff. Cast-Iron Pipe Co.		4,655.86
Sept.	29, Wm. Sandrow & Son .		35.00
Sept.	28, Wm. Rappich		25.00
Sept.	30, B. Cunningham		
		tunnel, conduit L.	
	annamia an	E. H	3,000.00
4	Jos. Churchyard	The state of the s	
		new building, L. E.	
		Н	1,000.00
"	F. B. Gallagher, cashier,		
	2221	ending Sept. 28th	2,032.80
	F. B. Gallagher, cashier,		2,219.24
	F. B. Gallagher, cashier,	- Company of the Comp	
	M-41 N-41 0	ending October 5th	2,056.76
Sept.	17, Matthews, Northrup &		26.00
	Co	Envelo sand print g	26.00

Aug.	22, Matthews, Northrup &	
	Co Note heads §	12.50
Aug.	2, C. W. Miller Coach hire	8.00
Sept.	16, Jas. D. Warren's Sons, Printing	9.00
Sept.	17, Lockwood & Ough Imp. tracing cloth	9.95
Sept.	13, Buffalo Gas Light Co Coke and cartage	13.00
July	23, Howard H. Baker & Co. Ropes, blocks, etc.	14.48
July	10, Scatcherd & Son Lumber	39.38
Aug.	30, Goodyear Rubber Co. Gaskets and pack'g	9.92
Sept.	24, Goodyear Rubber Co. Rubber goods	127.75
Sept.	30, Bingham & Taylor Valve castings	447.50
Sept.	23, H. G. Trout Labor on gate val.	12.10
Aug.	15, H. G. Trout Work on valves	10.50
Mar.	29, Hersey Meter Co Meter and strainers	145.50
Sept.	18, Urban & Co Feed	4-35
Aug.	25, Adams & White Office supplies	4.80
Aug.	28, Sawyer Mann Electric	
	Co Lamps	75.35
Sept.	28, Engineering News Pub.	
	Co Subscription	5.00
Aug.	12, Fairbanks & Co Two scales	121.50
Sept.	4, Buffalo Sewer Pipe Co. Sewer pipe	28.88
Aug.	31, James Boland Build'g turn-tables	220.00
June	25, James Boland Mason work	30.25
Aug.	31, James Boland Mason work	95.85
Aug.		
	29, James Boland Mason work	294.40
July	29, James Boland Mason work 25, Farrar & Trefts Eight turn-tables,	294.40
July	25, Farrar & Trefts Eight turn-tables, etc	1,003.83
Sept.	25, Farrar & Trefts Eight turn-tables, etc	Annual Co
	25, Farrar & Trefts Eight turn-tables, etc	1,003.83
Sept.	25, Farrar & Trefts Eight turn-tables, etc	1,003.83

Aug. 22, Leonard Hettrich Removing earth .	\$ 211.50
Aug. 31, Richard Brennan Bolts, nuts, etc	115.35
Sept. 13, Howard Iron Works . Castings	636.91
Aug. 28, Whittet, Barrett & Co. Packing-waste, etc.	146.00
Aug. 31, Hardwick & Ware Machine work	20.10
Sept. 28, Miller Bros Wagon repairs	82 20
Oct. 12, B. Cunningham Paid on contract for	
new tunnel, etc	4,000.00
" F. B. Gallagher, Cashier, Wages, laborers',	
w'k end'g Oct. 12,	2,003.54
Sept. 12, Buff. Cast-Iron Pipe Co., Pipe and specials .	96.60
" Buff. Cast-Iron Pipe Co., Pipe and specials .	2,882.55
Sept. 19, Buff. Cast-Iron Pipe Co., Pipe and specials .	4,305.04
" Buff. Cast-Iron Pipe Co., Pipe and specials .	269.06
Sept. 26, Buff. Cast-Iron Pipe Co., Pipe and specials.	2,829.90
Sept. 25, Buff. Cast-Iron Pipe Co., Pipe and specials .	188.64
Sept. 20, Buff. Cast-Iron Pipe Co., Pipe and specials.	24.10
Sept. 27, Buff. Cast-Iron Pipe Co., Pipe and specials .	2,456.67
Oct. 3, Buff. Cast-Iron Pipe Co., Pipe and specials.	40.65
Oct. 21, Jos. Churchyard Paid on contract	
for new buildings,	
L. E. H	1,000.00
" F. B. Gallagher, Cashier, Wages, laborers,"	
w'k end'g Oct. 19,	2,166.42
Aug. 16, Frank L. Georger Gasoline	4.65
Oct. 9, Nat'l Meter Co., N.Y Crown meter, etc.	320.00
Oct. 11, Nat'l Meter Co., N.Y Crown meter, etc.	629.00
Sept. 28, S. D. Colie Lumber	118.90
Aug. 22, Farrar & Trefts Forge and lath w'k	246.00
May 18, Otto Ulbrich Newspaper files	.60
Oct. 5, Sheeler & Sons Wire cloth	27.00
Mar. 19, Reinecke & Zesch Advertising	52.00

Aug.	12, Cornell Lead Co	Lead Pipe	\$ 11.58
Sept.	-20, Howard Iron Works .	Top hoods, etc	90.44
Sept.	9, The Barber Asphalt Pav-	Section 1	
	ing Co	Pavement repairs .	29.26
Oct.	12, J. E. Parks	R. R. Spikes	24.72
Oct.	9, S. Sommerville & Sons.	Medicine and care	12.00
Aug.	15, Buffalo Storage and		
	Carting Co	Hauling valves	60.00
Oct.	21, Westermeier Bros	Wagon repairs	12.00
Aug.	5, W. H. Arthur	Roof paint	11.25
Sept.	30, James Boland	Mason work	70.75
**	James Boland	Mason work	16.00
Aug.	31, Beals & Brown	Hardware	26.96
Sept.	30, Beals & Brown	Hardware	55.61
July.	23, Lesswing & Stines	Wagon repairs	66.45
Oct.	18, C. J. Heinold	Brooms and feed .	329.98
Oct.	28, F. B. Gallagher, Cash'r,	Wages of laborers,'	
		w'k end'g Oct. 26,	2,166.43
a	F. B. Gallagher, cashier	Pay-roll, October .	2,232.13
Oct.	4, Buff. Cast-Iron Pipe Co.	Pipe	63.47
46	Buff. Cast-Iron Pipe Co.	Pipe	1,906.94
**	Buff. Cast-Iron Pipe Co.	Pipe	18.34
	Buff. Cast-Iron Pipe Co.	Pipe	2,446.81
a	Buff. Cast-Iron Pipe Co.	Pipe	149.33
Oct.	31, Mackwirth Bros	Paym't on contract,	1,000.00
Oct.	23, C. H. Kellogg	Iron and labor	132.15
Sept.	30, F. Collignon	Oil pump, etc	14.78
Sept.	24, P. G. Straub	Pier binders, capes,	
		etc	198.00
Nov.	11, F. B. Gallagher, Cash'r,	Wages, laborers,'	
		w'k end'g Nov. 9,	1,626.12
Nov.	4, F. B. Gallagher, Cash'r,	Wages, laborers,	
		w'k end'g Nov. 2,	65.77

Nov. 11, The Holly M'n'f'g Co.,	Paym't on contract	
Lockport, N.Y	for new engine \$:	20,000.00
Nov. 18, John T. Rees, Registrar,	Wages, laborers',	
	w'k end'g Nov. 16,	2,225.42
Oct. 31, Buffalo Gas Light Co	Coke and cartage	31.20
Oct. 21, The Buff. Mutual Gas		1 SHILL
Light Co	Labor and material	3.92
July 18, P. Hickler	W'k on Inlet Pier	150.00
Sept. 19, Haas & Klein	Stationery and	
	printing	5.00
Oct. 29, Matthews, Northrup &		12000
Co	Blanks	8.75
Oct. 15, Matthews, Northrup &		
Co	Blanks	24.50
Oct. 29, Joseph Bourgnon		1.80
Sept. 17, E. & B. Holmes	Lumber	66.06
Oct. 19, P. G. Straub	Door and window	
	sills	108.80
Aug. 5, Franklin Bros	Tallow	18.80
Oct. 1, Goodyear Rubber Co	Rubber packing	28.25
Nov. 7, Buffalo St. Railroad Co.	Street rails	415.36
Oct. 1, John Lyth & Sons	Vit. pipe and spec'ls	24.82
Sept. 9, Becker & Wickser	Harness repairs, etc.	61.25
Oct. 4, Bingham & Taylor	Valve boxes, etc	349 50
Oct. 5, Hardwick & Ware	Hardware and lab'r	33.98
Oct. 6, Walbridge & Co	Nails, files, etc	14.78
Oct. 28, Star Oil Co	Oil	11.41
Oct. 14, C. J. Hamilton	Material and labor.	74.81
Oct. 14, James Boland	Mason work	116.25
Oct. 17, John C. Post	Paint and glass	1.70
Oct. 3, S. D. Colie	Lumber	258.85
Oct. 11, Ludlow Valve Manuf'g	A	
Co., Troy, N. Y	Valve	51.40

Sept. 6,	Leonard Hettrich, jr	Repair'g pavements	780.55
Sept. 4 }	Farrar & Trefts {	Machine work and castings	1,285.11
Oct. 3 to 30, }	Farrar & Trefts	Forgeand lathe w'k	384.00
Oct. 22 } to 30, }	Buff. Cast-Iron Pipe Co.	Pipe and specials .	1,125.78
**	Buff. Cast-Iron Pipe Co.	Pipe and specials.	907.50
**	Buff. Cast-Iron Pipe Co.	Pipe and specials .	17.34
**	Buff. Cast-Iron Pipe Co.	Pipe and specials .	1,247.24
**	Buff. Cast-Iron Pipe Co.	Pipe and specials .	68.68
Nov. 9,	Buff. Cast-Iron Pipe Co.	Pipe and specials .	3,209.14
"	Buff. Cast-Iron Pipe Co.	Pipe and specials .	28.02
-11	Buff. Cast-Iron Pipe Co.	Pipe and specials .	30.99
45	Buff. Cast-Iron Pipe Co.		3.779.47
Nov. 25,	F. B. Gallagher, Cash'r,		2,174.06
10	F. B. Gallagher, Cash'r,		
		w'k end'g Nov.23rd	967.39
Dec. 2,	F. B. Gallagher, Cash'r,	0	, , ,,
		w'k end'g Nov.30th	1,303.68
-11	Mackworth Bros		.,505,00
	Autom Diosi	for new roof	1,492.56
11	James Boland		1492.30
	James Doland	for old chimney .	2,400.00
ii.	Bott & Hughes		2,400.00
	Dott & Trugiles	for painting roof,	
		A CONTRACTOR OF THE PARTY OF TH	265.66
	P. Consingham	etc	205.00
	B. Cunningham	A CONTRACTOR OF THE PARTY OF TH	
		for setting gates,	60 -0
ir	E. D. C-11-1 C-11	tunnels	5,568.58
	F. B. Gallagher, Cash'r,		0
		w'k end'g Dec, 7th,	899.99

THE BUFFALO CITY WATER WORKS.

69

88.95

Aug. 7, J. V. Marion	12.00
Nov. 21, Estate of S. L. Watson, Rent of sails	29.00
Dec. 4, Loegler & Ladd Pole spring	2.00
Oct. 5 to R. Brennan Forge work, etc	41.88
to H. H. Baker & Co Wire rope, etc	49.31
Oct. 26,)	
Oct. 1 to Beals & Brown Hardware	11.60
Nov. 1, Wallridge & Co Lantern Globes .	3.76
Nov. 16, Westermeirer Bros Shaft on cart	2.50
April 24, Weed & Co Hardware	4.61
Nov. 29, Lockwood & Ough Office sundries	2.90
Dec. 2, Plumb, Burdict & Barn-	
ard Bolts, nuts, etc	1.24
Dec. 14, F. B. Gallagher, Cash'r, Wages, laborers',	
w'k end'g Dec. 14th	762.63
Dec. 23, Williamsville Lime Co. Cement	49.00
" Howard H. Baker & Co. Blocks	2.20
" Cornell Lead Co Lead pipe and sold'r	45.74
" Beals & Brown Hardware	35.55
" R. Brennan Material and labor	
on roof	58.38
" Bott & Hughes Painting	265.34
" James Boland Mason work	692.89
" Hardwicke & Ware. Machine work and	
fittings	48.64
" Buff. Cast-Iron Pipe Co. Pipe	697.87
" Buff. Cast-Iron Pipe Co. Pipe	297.11
" The Holly Manufact'g	
Co., Lockport, N. Y Paid on contract for	
new engine No. 6. 1	15,000.00

Jan.	9, E. G. Marvin		42.40
"	H. H. Baker & Co	Manilla rope	17.41
**	Bingham & Taylor	Valve boxes	40.49
"	J. J. McWilliams, Ag't.	Coal	39.74
- 44	W. H. H. Newman & Co.		11.70
"	J. H. Ruckle & Co	Packing	22.98
**	C. J. Heinold	Straw, soap and salt	146.32
**	C. J. Heinold		185,88
11	Matthews, Northrup &		
	Co	Cards	3.00
**	John Lyth & Sons	Tile pipe	5.16
**	The Courier Co	Two copies Daily	-
		Courier	4.00
11	Goodyear Rubber Co.	Empire packing.	8.00
**	D. J. Stickney		8.00
60	C. Stum	Expansion rings .	4.80
**	French & Kirkholder .	Pails and brooms .	7.00
**	John C. Post	Glass and putty .	.85
-	Adams & White	Stationery	6.45
66	Louisa Brechtel	Washing towels	8.00
16	Urban & Co.,	Feed	6.40
	W. H. Edson	Soft soap	9.00
Jan.	28, Jas. D. Warren's Sons'	Printing	3.00
**	J. H. Ruckle & Co	Brass springs	6.00
"	D. J. Stickney	Coal	4.00
"	Scatcherd & Son	Lumber	1.44
	Irlbacker & Davis	Gas pipe	2.76
- 41	Weed & Co	Door rollers	.60
1 46	Star Oil Co	Oil	210.89
- 0	C. J. Hamilton	Lumber	33.64
11	S. D. Colie	Lumber	84.06
- 16	Beals & Brown	Hardware	18.35

F. B. Gallagher, Cash'r, Protecting hydrants

309.00

Feb. 25,	Pay roll	Pay roll, February, \$ 5,	176.74
**	N. Y., L. E. & W. R. R.	Freight on m'dse.	11.00
Feb. 21	, T. R. Simpson	Hay	156.18
March 4	, F. B. Gallagher, Cash'r,	Wages, laborers,'	
		w'k end'g Mar. 2d.,	360.50
March 11	, F. B. Gallagher, Cash'r,	Wages, laborers',	
		w'k end'g Mar. 9th	297.38
44	Buff. Nat'l Gas Fuel Co.	Gas for Feb., 1889.	584.40
	Russell & Watson	Wicking	3.50
ii.	The Bell Telephone Co.,	Telephone rental.	125.00
"	The Bell Telephone Co.,	Repairing Inlet Pier	
		cable	4.25
"	D. J. Stickney	Coal	11.00
"	Powell & Plimpton	Merchandise	2.50
**	Urban & Co	Feed	4.25
	J. H. Ruckle & Co	Engine and pump	
		fittings	14.77
**	M. Riter	Boiler repairs, . ,	28.15
	Farrar & Trefts	Castings and labor,	382.72
"	Adams & White		98.33
"	Goodyear Rubber Co.,	Rubber sundries .	31.66
**	John C. Post	Paint, etc	5.42
March 18	, Lesswing & Stines	Wagon repairs	153.20
"	Irlbacker & Davis	Plumbers' supplies,	157.95
16	C. J. Hamilton		2.00
**	Whittet, Barrett & Co.,	White waste	11.88
#	Godfrey Heiser		26.09
**	Hardwicke & Ware , .	Valve and fittings,	11.03
0	Queen City Metal Co.,		19.80
0	F. B. Gallagher, Cash'r,		50.00
March 25	, Miller Bros	Wagon repairs	52.20
"	Star Oil Co	Oil	234.81

April	22, Urban & Co	Feed \$	3.95
***	Goodyear Rubber Co	Rubber bands, etc.,	4.90
. 66	J. J. McWilliams	Coal	5.50
	Beals & Brown	Hardware	6.74
	The Buff. Rubber Co.,	Gaskets	11.38
	Star Oil Co	Oil	169.73
60	S. D. Colie	Lumber	15.20
**	Ludlow Valve Man'f'g		
	Co	Rubber goods	24.70
10	Adams & White	Stationery	2.42
**	D. J. Stickney	Coal	11.00
"	Pay roll	Pay roll, April	5,247.18
May	6, Buffalo Natural Gas and	Gas for month of	
	Fuel Co	April	2,542.15
- 66	The Bell Telephone Co.,	Telephone rental.	25.00
44.	L. F. Huson	Repairing clocks .	4.50
44	The Eddy Valve Co.,		
	Waterford, N. Y	Valve fittings	50.00
	J. D. Warren's Sons	Printing	18.00
-11	Fries & Co	Meter repairs	1.85
May	13, F. B. Gallagher, Cash'r,	Postage	50.00
May	20, Leonard Hettrich, Jr	Repair'g pavements	516.74
11	International Ferry Co.,	Services Steamer	
		Niagara	105.00
- 11	Russell & Watson	Cups and wicking	3.20
,	Edward B. Smith		75.00
"	Geo. E. Matthews & Co.,	Two copies Ex-	
	- 1	press three mos	4.00
**	Goodyear Rubber Co.,	Boots	5.50
May	27, Pay roll	Pay roll, May	5,045.79
46	P. Brennan, Eng. Pump-		
	House	Expenses advanc'd,	8.50

F. B. Gallagher, Cash'r, Postage and incid'ls

50.00

Tunn	a. Dan well	Dan wall Toma	* * * * * * * * * * * * * * * * * * * *
June	24, Pay roll		
July	1, Buff. Nat'l Gas Fuel Co.		3,019.42
	Sidney Shepard & Co.		1.62
	Sidney Shepard & Co.		8.45
"	Buffalo Scale Co		.60
- 61	The Bell Telephone Co.		125.00
**	M. Riter	The state of the s	13.60
	Adams & White	Stationery	67.33
66	Buffalo Scale Co	Wheelbarrow scale,	39.20
"	Lehigh Valley Coal Co.	Coal	83.80
16	Leonard Hettrich, Jr	Repairing pavem't,	2,045.66
July	15, Russell & Watson	Lamp wicks, etc	3.60
- 11	Buffalo Rubber Co	Packing	5.00
66	Wm, H. Edson	Soft soap	9.00
16	Fries & Co	Corporation cocks,	4.90
		Valve fittings	4.00
- 66		Engine fittings, etc.	8.72
16	Walbridge & Co	Sprinkler	1.40
-	Goodyear Rubber Co	Packing and gask's,	11.19
- 11	Enterprise Oil Co	Compound	12.00
16	Star Oil Co	Oil	141.98
- 66	Holly Manufact'g Co.,		
		Piston repairs	49.88
-11		Engine and pump	118.00
		fittings	52.60
- 66	Miller Bros	Wagon repairs	119.30
44	Hardwicke & Ware	Fittings	252.27
**	Haas & Klein	Stationery	134.00
July	22, M. Riter		34.55
2		boiler r'pr's, L.E.H.	5.69
**	Enterprise Oil Co		13.00
44	J. H. Ruckle & Co		12.55
			20

	THE BUFFALO CITY	WATER WORKS.	79
Testes	22 Matthaus Northeus P.		X The
July	22, Matthews, Northrup &		200
-20	Co		2.00
	Lesswing & Stilles	repairs	foot
	Whittet, Barrett & Co.		59.95
-	Hardwicke & Ware		24.38
	Traidwicke & Ware.	fittings	6.27
July	29, Buff. Nat'l Gas Fuel Co.,		3,337.67
July	Pay roll		5,024.91
Aug.	30, J. H. Ruckel & Co		77.70
	The Courier Co		9.00
a	Enterprise Oil Co		12.00
	Enterprise Oil Co		12.00
44	B. W. Goodrell, Chicago,	The state of the s	
	III		7.69
"	Geo. E. Matthews & Co.,		
		press, three mos	4.00
14	Louisa Brechtel	Washing towels .	9.40
**	W. F. Pratt & Co		165 65
24	Goodyear Rubber Co	Gasket pack'g, etc.,	11.20
"	Star Oil Co	Oil and grease	163.94
54	Whittet, Barrett & Co.,	Packing, etc	62.02
12	James Boland	Mason work	11.40
46.	Wm. Baynes	Cleaning streets	72.50
**	Buffalo Natural Gas Fuel		
	Co	Fuel for August	4,698.78
60	Pay roll		4,561.05
**	Farrar & Trefts		56.95
44	Leonard Hettrich, Jr		
	a sea de como		104.96
-	2, The Courier Co		75.00
Aug.	24, Conrad Smith ,	Hay	42.00

July	20, M. Riter Boiler repairs, etc., §	1.63
Aug.	15, John McComb Soap	8,00
"	F. C. Schottin Binding reports	60.00
Aug.		
	printing printing	65.00
Aug.	24, Albright & Smith Coal	5.393.54
Aug.	3, Fries & Co Corp. cocks, etc	221.87
June	6, Farrar & Trefts Forge and lath w'k,	184.81
Sept.	14, Albright & Smith Coal	4,677.43
Sept.	30, Buffalo Natural Gas Fuel for month of	20000
77.7	Fuel Co September	3,837 24
**	Pay roll Pay roll, Sept	4,438.49
Aug.	30, Goodyear Rubber Co., Gaskets packing .	1.72
Sept.	24, Goodyear Rubber Co., Rubber goods	20.25
July	25, Farrar & Trefts Turn tables	5.60
Sept.	25, Star Oil Co Oil	105.81
Aug.	22, Enterprise Oil Co K. L. compound .	36.00
Aug.	20, Enterprise Oil Co Oil	197.68
Aug.	29, Becker & Wickser Harness repairs	56.30
Aug.	28, Whittet, Barrett & Co., Packing waste, etc.,	46.34
Aug.	22, J. H. Ruckel & Co Castings, fittings,	
	etc	32.56
Oct.	21, John T. Rees, Regist'r, Freight and exp's,	26.77
Aug.	20, Enterprise Oil Co K. L. compound .	72.00
Oct.	3, Albright & Smith Coal	2,520.77
Aug.	22, Farrar & Trefts Forge and lath w'k,	20 88
Oct.	8, John McComb Soap	8.00
Oct.	15, The Bell Telephone Co., Telephone rent.	25.00
July	6, Queen City Metal Co Tapping Jack	37.83
Oct.	2, Ludlow Valve M'f'g Co.,	
-	Troy, N. Y Valves and stems.	674.00
Sept.	28, Fries & Co Corporation cocks.	161.02

240 00 20	a water		
	M. Riter		\$ 80.33
	Pay roll		4,464.24
Nov. 4, I	F. B. Gallagher, Cash'r,		
		w'k endg. Nov. 2,	1,887.70
Nov. 18, I	Buff. Nat'l Gas Fuel Co.,	Fuel for m'h of Oct.	4,345.97
Oct. 26, E	Buffalo Scale Co	Testing scales	2.40
Nov. I, I	Buffalo Scale Co	Scales	21.00
Oct. 15, N	Matthews, Northrup &		
	Co	Blanks for office .	22.25
Sept. 26, J	. H. Ruckel & Co	Valves, packing, etc.	16.20
Jan. 8, '87,)		The state of the s	
to	Franklin Bros	Tallow	22.40
Aug.5,'89)			
	Goodyear Rubber Co.		112.12
	Jrban & Co		4.95
Nov. 4, (Geo. E. Matthews & Co.		
		three months	4.00
	Hardwicke & Ware		16.90
	Star Oil Co		196.54
Oct. 7, J	. J. McWilliams, Ag't,	Coal	14.25
Oct. 17, J	ohn C. Post	Paint and glass	6.75
Sept. 19, 1	Wells Dygert	Tape	1.75
Oct. 26, I	Leonard Hettrich, Jun.,	Repair'g pavements	500.00
Oct. 31, 4	Albright & Smith	Coal	4,131.53
Oct. 3, 1	Farrar & Trefts	Forgeand lathe w'k,	102.67
Sept. 4, I	Farrar & Trefts	Machine work and	
		castings	122.63
Oct. 22, 1	Buff. Cast-Iron Pipe Co.,	Pipe and specials .	3,000.00
Nov. 25, 1	Pay roll	Pay roll, November,	4,348.10
	F. B. Gallagher, Cash'r,		50.00
Dec. 2,	Buff. Nat'l Gas Fuel Co.,	Fuel for m'h of Nov.	3,650.05
	Star Oil Co		166.67
	J. H. Ruckel & Co		41.16
-	Control of the Contro		The same of

Oct.	2, J. H. Ruckel & Co	Packing, etc	\$ 19.41
Sept.	17,)		
to	Whittet, Barrett & Co.,	Hose waste, etc	13.60
Oct.	25,)		
Nov.	1, Goodyear Rubber Co.,		13.00
44	Buffalo Gas Light Co		26.00
July	8, R. Dunbar & Son	Repairing engines,	8.15
Nov.	30, Louisa Brechtel	Washing towels .	6.60
Nov.	11 Jno. C. Post	Glass and putty	200
to	23, 5 110. C. 10st	diass and putty.	3-55
July	29, Powell & Plimpton	Drugs	4.40
Nov.	26, Cornell Lead Co	Pig lead	2,051.19
Dec.	23, Haas & Klein	Postal cards and	
		printing	37.00
-11	Courier Litho. Co	Letter and billh'ds,	25.00
46	C. E. Brinkworth	Ribbon for dates .	3.00
"	Pratt & Letchworth .	Steel castings	14.13
**	German Boiler Comp'd		-
	Co	Boiler compound .	82.50
11	Beals & Brown	Hardware	5.15
**	Miller Bros	Wagon repairs	10.75
**	Lesswing & Stines	Wagon and sleigh	1 1 1 1 1
		repairs	24.60
a.	Albright & Smith	Coal	10,869.38
16	Hardwicke & Ware		1000
		fittings	78.83
**	Pay roll		4,803.09
**	Buff. Nat'l Gas Fuel Co.,		
		gas omitted in Feb.,	
		1889	610.10
44	Jos. E. Barnard, Comp.,		
	, , , , , , ,	months of 1889 .	1,230,36
u	Jos. E. Barnard, Comp.,		7 7 7
		_	-
	Total	\$1	45,822.98

DODGE FARM RESERVOIR.

June	24, New Reservoir	Wages of employ's on new reservoir, \$ 172.15
July	1, O'Brien & Clark	Paym't on contract
		of contract of new reservoir 2,796.75
July	29, O'Brien & Clark	•
		tract of new r'v'r, 10,000.00
"	Pay roll	Dodge Farm for
		July 294.50
46	Buff. Cast-Iron Pipe Co.	
**	Buff. Cast-Iron Pipe Co.	
"	James C. Fullerton	
		to Geo. Semper. 315.00
Aug	30, O'Brien & Clark	
		Dodge Farm r'v'r, 17,203.25
"	Pay roll	
		Dodge Farm, for
		August, 1889 340.00
"	Buff. Cast-Iron Pipe Co.	
"	Buff. Cast-Iron Pipe Co.	
"	Buff. Cast-Iron Pipe Co.	
"	Buff. Cast-Iron Pipe Co.	
Sept.	23, Buff. Cast-Iron Pipe Co.	
Sept.	30, O'Brien & Clark	
		for const'g Dodge
		Farm reservoir . 18,000.00

TWENTY-FIRST ANNUAL REPORT OF

	o, Pay roll	Wages, employees', Dodge Farm, for	
7		September \$ 339.00	
ot.	11, Buff. Cast-Iron Pipe Co.	Pipe and specials . 623.93	
.pt.	20, Buff. Cast-Iron Pipe Co.	Pipe and specials . 624.79	
t.	3, Buff. Cast-Iron Pipe Co.	Pipe and specials . 1,867.06	
t.	28, Pay roll	Wages, employees', Dodge Farm, for	
200		October 391.00	
it.	4, Buff. Cast-Iron Pipe Co.		
	, O'Brien & Clark		
- 3		Dodge Farm r'v'r, 20,000.00	
t,	Buff, Cast-Iron Pipe Co.	Pipe and specials . 614.29	
v.	25, Pay roll	Wages of laborers, at Dodge Farm reservoir for	
	424 0.5	November, 1889 . 391.00	
2.	9, O'Brien & Clark	for cons'g Dodge	
		Farm reservoir . 13,000.00	
Dec.	16, Pay roll	Wages of laborers, at Dodge Farm reservoir for Dec. 122.25	
	Total	\$97,095.05	
	SERV	ICES.	

There was added three thousand five hundred and two new services during the year.

The total number of services in the city, January 1, 1890, is thirty-six thousand one hundred and sixty-nine.

Respectfully submitted,

JOHN T. REES, Registrar.

DISTRIBUTION

OF THE

WATER DEPARTMENT

FOR THE

YEAR 1889.



FIRE HYDRANTS.

The number of Fire Hydrants placed on new line of mains was 159, of which 80 were on the high service, and 79 on the reservoir supply; also, five new hydrants placed on old line of mains, of which two was on the high service, and three on the reservoir supply, making the total number in the city December 31, 1889, 2,438. Following schedule gives location of hydrants set during 1889:

HYDRANTS ABANDONED.

Clinton Street, south side, fifty feet east of Fillmore Avenue.
Clinton Street, south side, 500 feet east of Fillmore Avenue.
Clinton Street, south side, opposite Jones Street.
Clinton Street, south side, between Lewis Street and Clemo Streets.
Flinton Street, south side, opposite Laux Street.
Clinton Street, southeast corner of Babcock Street.
Elm Street, northeast corner of Sycamore Street.
Elm Street, east side, between Broadway and Sycamore Streets.
Washington Street, west side, between Virginia Street and Goodell Street.

Peckham Street, southwest corner of Jefferson Street.

Old hydrants taken out and replaced by new hydrants on line of pipe where old pipe was taken out and new and large pipe put in:

Pearl Street, southwest corner of Church Street.
 Franklin Street, northeast corner of Church Street.
 Franklin Street, southwest corner of Eagle Street.
 Franklin Street, west side, fifty feet south of Swan Street.

Delaware Avenue, southwest corner of Eagle Street.

South Division Street, southeast corner of Michigan Street.

South Division Street, southeast corner of Chestnut Street.

South Division Street, southeast corner of Pine Street.

South Division Street, southwest corner of Cedar Street.

Elk Street, south side, opposite Winona Street.

LOCATION OF FIRE HYDRANTS SET IN THE YEAR 1889.

Location.	Syst	em.	Sewered.
Abbott Road, south side, west of Erie railroad.	R		
Abbott Road, south side, sixty feet east of Elk			
Street	R.		
Armbruster Street, east side, 830 feet south of			
Broadway		H.	
Auburn Avenue, southwest corner of Tryon			
Place		H.	
Auburn Avenue, southwest corner of Putnam			
Street		H.	
Auburn Avenue, southwest corner of Livingston			100
Street		H.	
Annie Place, southeast corner of Grant Street.		H.	S.
Annie Place, south side, forty-two feet west of			
Tryon Place		H.	S.
Babcock Street, west side, 400 feet south of Clin-			
ton Street	R.		S.
Babcock Street, west side, north of B. N. Y. &			
P. railroad	R.		S.
Babcock Street, west side, south of B. N. Y. &			
P. railroad	R.		S_
Babcock Street, northwest corner of Clinton			
Street	R.		

Location.	Sy	stem.	Sewered.
Breckenridge Street, southwest corner of Cleve-		**	c
land Street		H,	S.
Brinkman Street, southwest corner of Rohe	IX.		٥.
Avenue		H.	
Bushnell Street, west side, 480 feet north of			
Clinton Street	R.		
Baitz Avenue, southwest corner of Oneida Street,	R.		
Baitz Avenue, west side, end of pipe	R.		
Benzinger Street, west side, between Reiman Street and King Street	R.		
Benzinger Street, southwest corner of King	IV.		
Street	R.		
Bardol Street, southwest corner of Spies Street,		H.	
Beck Street, west side, 760 feet north of Broad-			
way		H.	
Cleveland Street, northwest corner of Ferry			
Street		Н.	S.
Curtis Street, southwest corner of Broadway. Curtis Street, southwest corner of Dover's Ave.		H.	٥.
Concord Street, southwest corner of Curtis		1.1.	
Street		H.	
Concord Street, southeast corner of Arlington			
Avenue		H.	
Church Street, northeast corner of Delaware	-		
Avenue	R.		S.
Church Street, northwest corner of Delaware Avenue	R.		S.
Church Street, southeast corner of Franklin	14.		9.
Street	R.		S.
Church Street, southwest corner of Franklin			
Street	R.		S.

Location,	System.	Sewered,
Church Street, southwest corner of Pearl Street,	R.	S.
Church Street, northwest corner of Pearl Street,	R.	S.
Cleveland Avenue, north side, 500 feet west of		
Delaware Avenue	H.	
Cleveland Avenue, north side, 1,300 feet west		
of Delaware Avenue	H.	
Clinton Street, southeast corner of Fillmore		
Avenue	R.	
Clinton Street, south side, 720 feet east of Bailey		
Avenue		
Clinton Street, south side, at the Brick House ."	R.	
Clinton Street, southwest corner of Weiss Street,	R.	
Clinton Street, southwest corner of Barnard		
Street		
Clinton Street, southwest corner of Cable Street,	R.	
Clinton Street, southwest corner of Weimer		
Street	R.	
Clinton Street, southwest corner of South		
Ogden Street	R.	
Clinton Street, near the City Line (south side),	R.	
Clemo Street, northwest corner of Clinton Street,	R.	
Davy Street, northwest corner of William Street,	R.	
Davy Street, west side, centre of block between		
William Street and Ludington Street	R.	
Delaware Avenue, northeast corner of Eagle		
Street	R.	S.
Delaware Avenue, southeast corner of Eagle		
Street	R.	S.
Delaware Avenue, northwest corner of Eagle		
Street	R.	S.
Delaware Avenue, southwest corner of Eagle	27	100
Street	R.	S.

Location.	System.	Sewered.
Dupont Street, southwest corner of Woodlawn		
Avenue	H.	
Dingens Street, south side, 750 feet east of		
Bailey Avenue	R.	
Dingens Street, south side, centre of block		
between Weiss Street and Colson	R.	
Dingens Street, southeast corner of Colson		
Street	R.	
Delavan Avenue, south side, 600 feet west of		
Chapin Park	H.	
Elm Street, southeast corner of Vine Alley, off		
the 36-inch pipe		
East Parade Avenue, opposite North Parade		
Avenue	H.	
Efner Street, southwest corner of Carolina		
Street, on old pipe	R.	
Efner Street, centre of block between Georgia		
Street and Carolina Street, on old pipe		
Elk Street, south side, opposite Winona Street,	R.	
Elk Street, south side, 350 feet east of Winona		
Street		
Elk Street, south side, opposite Dole Street	R.	
Elk Street, south side, 420 feet east of Dole		
Street	R.	
Elk Street, south side, west of the D. L. & W.		
railroad		
Elk Street, south side, opposite Fisher Avenue,	R.	
Elk Street, south side, 300 feet east of Fisher		
Avenue	R.	
Franklin Street, northeast corner of Eagle		
Street	R.	S.

· · · · · · · · · · · · · · · · · · ·		
Location.	System.	Sewered
Franklin Street, northwest corner of Eagle		
Street	R.	S.
Franklin Street, southwest corner of Eagle		
Street	H.	S.
Franklin Street, northwest corner of Church		
Street	H.	S.
Franklin Street, northeast corner of Church		
Street	H.	S.
Franklin Street, northwest corner of Swan		
Street	H.	S.
Franklin Street, northeast corner of Swan		
Street	H.	S.
Franklin Street, southeast corner of Swan	-	
Street	- H	S.
Franklin Street, west side, 50 feet south of Swan	***	٠.
Street	H.	S.
Glenwood Avenue, southeast corner of Jefferson	***	-
The state of the s	H.	
Street	11.	
Glenwood Avenue, southwest corner of Hauf	17	
Street	H.	
Glenwood Avenue, southwest corner of Brook-	**	
lyn Street	H.	
Grant Street, southwest corner of Clinton Avenue,	H.	
Gilbert Street, southwest corner of Oneida	-	
Street	R.	
Gilbert Street, west side, end of pipe at the Erie		
railroad	R.	
Gatchell Street, southwest corner of Olmstead		
Avenue	H.	
Glore Street, southwest corner of Austin Street,	R.	
Highland Avenue, south side, 500 feet west of		
Delaware Avenue	H.	

Location.	S	ystem.	Sewered.
Highland Avenue, south side, 1,000 feet west			
of Delaware Avenue		H.	
Highland Avenue, north side, 500 feet east of			
Elmwood Avenue		H.	
Hirschbeck Street, southwest corner of Olm-			
stead Avenue		H.	
Jones Street, northwest corner of Clinton Street,	R.		
Jones Street, southwest corner of Norton Street,	R.		
Jewett Avenue, southeast corner of Parkside			
Avenue		H.	
Kingsley Street, southwest corner of Humboldt			
Parkway		H.	
Kingsley Street, southeast corner of Wohler's			
Avenue		H	
Laux Street, northwest corner of Clinton Street,	R.		
Lovejoy Street, northeast corner of Sweet			
Avenue	R.		
Latour Street, northwest corner of Walden			
Avenue		H.	
Loepere Street, southwest corner of Walden			
Avenue		H.	
Lewis Street, northwest corner of Clinton Street,			
Metcalf Street, northwest corner of Clinton			
Street	R.		
Milton Street, west side, 500 feet north of			
Seneca Street	R.		
Milton Street, west side, 300 feet south of			
Seneca Street	R.		
Marshall Street, northwest corner of Genesee			
Street		H.	
Marshall Street, southwest corner of Bardol			
Street		H.	

Location.	System.	Sewered.
Mills Street, southwest corner of Preston Street,	H.	Sewered.
Main Street, opposite Robie Street, on old pipe,	H.	
Main Street, opposite Florence Street, on old		
pipe	H.	
Newton Street, southwest corner of Curtis Street,	H.	
Newton Street, southeast corner of Arlington	222	
Avenue	H.	
Owahn Place, northeast corner of the Abbott		
Road	R.	
Perry Street, southwest corner of Orlando Street,		
Perry Street, south side, centre of block between		
Smith Street and Erie railroad	R.	
Perry Street, south side, east of Erie railroad .	R.	
Peckham Street, southeast corner of Jefferson		
Street	R.	
West Parade Avenue, southwest corner of		
Dodge Street	H.	
Puerner Avenue, south side, centre of block		
between Avenue A and East Parade	H.	
Puerner Avenue, southwest corner of East		
Parade Avenue	H.	
Puerner Avenue, south side, opposite Josephine		
Street	H.	
Puerner Avenue, south side, 550 feet east of		
Kehr Street	H.	
Pooley Street, south side, centre of block		
between Grant Street and Dewitt Street	R.	
Prenatt Street, southwest corner of Owahn		
Place	R.	
Playter Street, southwest corner of Grimes		
Street	H.	
Playter Street, northwest corner of Lovejoy		
Street	H.	

Location.	System.	Sewered,
Reiman Street, southeast corner of Benzinger		
Street	H.	
Reiman Street, southeast corner of Garfield	H.	
Rother Avenue, southwest corner of Stanislaus	Н.	
Street	11.	
between Walden Avenue and Genesee St.,	H.	
South Division Street, southeast corner of	***	
Michigan Street	R.	
South Division Street, southeast corner of		
Chestnut Street	R.	
South Division Street, southeast corner of		
Pine Street	R.	
South Division Street, southwest corner of		
Cedar Street	R.	
East Summer Street, southeast corner of Elli-		
cott Street	H.	
East Summer Street, southwest corner of	Н.	
Michigan Street	п.	
Avenue	H.	
Scoville Avenue, southwest corner of Oneida	11.	
Street	R.	
Scoville Avenue, west side, at the Erie railroad,		
Shepard Street, northwest corner of Olmstead		
Street	H.	
Sears Street, northwest corner of Peckham		
Street	R.	
St. Stephen's Place, west side, 530 feet south		
of Abbott Road		
Seneca Street, southwest corner of Bailey		
Avenue	K.	

Location,	System	n.	Sewered.
Seneca Street, northwest corner of Elk Street.	R.		
Sobieski Street, northwest corner of Broadway	F	I.	
Sobieski Street, west side, centre of block			
between Broadway and Stanislaus Street .	1	H.	
Sobieski Street, southwest corner of Stanislaus			
Street	1	H.	
Sweet Avenue, west side, centre of block			
between Broadway and Stanislaus Street .	1	H.	
Sweet Avenue, southwest corner of Stanislaus			
Street	1	H.	
Titus Avenue, southwest corner of Harrison		*	
Street	- 11	H.	
Tonawanda Street, southeast corner of Grace			
Street	D		
	K.		
Tonawanda Street, southwest corner of Garfield	n		*
Street	K.		
Union Place, southwest corner of Richmond			
Avenue	1	I.	
Virginia Street, northeast corner of Washington	10		
Street	I	I.	
Virginia Street, southeast corner of Washington			
Street	I	I.	
Virginia Street, northwest corner of Washington			
Street	F	I.	
Virginia Street, southwest corner of Washington			
Street	F	I.	
Waverly Street, southeast corner of Puffer			
Street	I	ł.	
Wilson Street, west side, centre of block between			
William and Peckham Streets	R.		
Wilson Street, west side, centre of block between			
Lovejoy and Broadway	R.		
2017)			

Location.	System.	Sewered.
Washington Street, northeast corner of Burton		
Alley	H.	
Alley	Н.	
Washington Street, northwest corner of Burton		
Alley	H.	
Washington Street, southwest corner of Burton		
Alley	H.	
Winslow Street, southeast corner of Humboldt Parkway	H.	
Wasmuth Avenue, northwest corner of Walden	***	
Avenue	H.	
Wasmuth Avenue, west side, centre of block		
between Walden Avenue and Genesee	H.	
Street	п.	
Street	R.	
	_	- 164
Hydrants set in previous years		2,284
Less hydrants abandoned		2,448
Designation administration of the second		
Total		2,438
FIRE RESERVOIRS.		
Location.		Number.
Main Street, in front of Spaulding's Exchange.		1
Main Street, in front of Lafayette Park		1
Main Street, in front of churches		1
Main bucce, comer of Exchange		1

Main Street, corner of Seneca	Location. N	umber.
Main Street, corner of North Division	Main Street, corner of Seneca S.	1
Main Street, corner of Eagle	Main Street, corner of Swan H.	I
Main Street, corner of Eagle	Main Street, corner of North Division S.	1
Main Street, corner of Genesee S. I Seneca Street, corner of Chicago S. I Goodell Street, corner of Washington		1
Goodell Street, corner of Washington	The state of the s	1
Goodell Street, corner of Washington	Seneca Street, corner of Chicago S.	1
Niagara Street, corner of Mohawk		1
Eagle Street, corner of Genesee S. I Broadway, in front of Arsenal	Niagara Square, junction of Genesee and Court S.	1
Eagle Street, corner of Genesee S. I Broadway, in front of Arsenal	Niagara Street, corner of Mohawk connection	n. 1
Broadway, in front of Arsenal		1
		1
		1
Total,	Total,	16
Those marked "H" raised valves at curb.		

Those marked "H" raised valves at curb.

Those marked "S" have surface valves in streets.

DRINKING FOUNTAINS.

Location,						Number
Delaware Avenue, corner of Court.				4		1
Main Street, corner of Seneca						1
Main Street, corner of Erie						1
Main Street, opposite Court						1
Main Street, corner of Huron						1
Michigan Street, corner of Seneca						1
Michigan Street, corner of Broadway						1
Michigan Street, corner of Genesee .						1
Washington Market						1
						_
Total					131	0

HORSE FOUNTAINS.

Location.	Number.
Broadway, in front of Arsenal	1
Elk Street, between East and West Market	I
Elk Street, front of Atlas Refining Company	1
Elk Street, corner of Hamburgh	I
Erie Street, between Seneca and Terrace	1
Fillmore Avenue and Broadway	1
Forest Avenue, opposite No. 54	I
Fillmore Avenue, corner of William	I
Genesee Street, between Lower and Upper Terrace	I
Genesee Street, corner of Ellicott	1
Genesee and Walden Avenue	I
High Street, corner of Genesee	I
Main Street, corner of Ferry	1
Main Street, corner of Steele	I
Maryland Street, corner of Fifth	1
Niagara Street, between Eagle and Franklin	I
Niagara Street, corner of Prospect Avenue	I
Niagara Street, corner of Amherst, old style	I
Sycamore Street, corner of Beckwith	I
Louisiana Street, near Perry	I
Niagara Street, corner of Hertel Avenue	1
Swan Street, at Junction with Seneca	I
West Avenue, between York Street and Porter Avenue.	I
Best Street, north side, 100 feet west of Jefferson	I
Clinton Street, north side, 100 feet west of Emslie	1
Clinton Street, opposite Jones Street	I
Tonawanda Street, corner of Amherst	I
Total	27

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100

FREE HYDRANTS.

	Location.															Number			
Fourth St	ree	t, r	101	th	eas	t c c	rr	ner	of	C	ar	olii	na						1
Louisiana	St	ree	t,	eas	t s	ide,	b	etv	wee	n	0	hic	a	nd	S	ou	th		1
Total								•											_

NUMBER AND LOCATION OF VALVES SET IN 1889.

There were set in 1889 on new line of mains 406 valves, of which:

3 inch, .			•	•					•			•		•	10
4 inch, .								•						•	23
6 inch, .															293
8 inch, .															9
10 inch, .															27
12 inch, .															10
16 inch, .															15
20 inch, .		•													2
24 inch, .										•					1
36 inch, .		•				٠							•		16
Total															406

ABBOTT ROAD.

Io in. At Eric Railroad, 13 ft. N., 31 ft. W. of Hyd. Io in. At Elk St., 40 ft. N., 73 ft. W. of Hyd.

ARMBRUSTER ST.

6 in. At Broadway, 18 ft. S, 80 ft. E. of Hyd. cor. of Herschbeck St.

AUBURN AVE.

- 6 in. At Dewitt St., 30 ft. N. of Hyd.
- 6 in. At Grant St., 21 ft. E., 6 ft. S. of Hyd.
- 6 in. At Tryon Place, 161/2 ft. N., 2 ft. W. of Hyd.
- 6 in. At Tryon Place, 14 ft. N., 59 ft. E. of Hyd.
- 6 in. At Hoyt St., 44 ft. S., 13 ft. W. of Hyd.
- 6 in. At Hoyt St., 44 ft. S., 18 ft. E. of Hyd.
- 6 in At Baynes St., 19 ft. N., 9 ft. W. of Hyd.
- 6 in. At Baynes St., 28 ft. N., 48 ft. E. of Hyd.
- 6 in. At Livingstone St., 10 ft. N., 9 ft. W. of Hyd.
- 6 in. At Livingstone St., 10 ft. N., 58 ft. E. of Hyd.
- 6 in. At Howard Ave., 25 ft. N., 20 ft. W. of Hyd.
- 6 in. At Howard Ave., 26 ft. N., 58½ ft. E. of Hyd.
- 6 in. At Ashland Ave., 131/2 ft. N., 61/2 ft. W. of Hyd
- 6 in. At Ashland Ave., 13 ft. N., 431/2 ft. E. of Hyd
- 6 in. At Elmwood Ave., 5 ft. S., 15 ft. W. of Hyd.

ANNIE PLACE.

- 6 in. At Grant St., 11 ft. N., 21/2 ft. E. of Hyd.
- 6 in. At Tryon Place, 9 ft. N., 381/2 ft. E. of Hyd.
- 6 in. At Dewitt St., 181/2 ft. S., 52 ft. E. of Hyd.

A. STREET.

6 in. At Mills St., 34 ft. S., 3 ft. E. of N. W. C.

ADAMS ST.

20 in. S. of 36 in. in Peckham St., 16½ ft. E., 11½ ft. N. of Hyd. on S. W. C. 20 in. N. of 36 in. in Peckham St., 16½ ft. E., 31 ft. N. of Hyd. on S. W. C.

ASH ST.

- 6 in. S. of 36 in. in Sycamore St., 39 ft. W., 19 ft. N. of S. E. C
- 6 in. N. of 36 in. in Sycamore St., 39 ft. W., 35 ft. N. of S. E. C.
- 4 in. N. of 10 in. in Sycamore St., 39 ft. W., 46 ft. N. of S. E. C.

BABCOCK ST.

- 10 in, At Clinton St., 60 ft. S., 21 ft, E. of N. W. C.
- 10 in. At Railroad, 6 ft. E., 432 ft. N. of Hyd. south of Railroad.
- 6 in. For the Buffalo Car Works, 338 ft. S. of Hyd.
- 6 in. North of Clinton St., 5 ft. E., 2 ft. N. of Hyd.

BRECKENRIDGE ST.

- 6 in. At Cleveland St., 5 ft. E., 3 ft. S. of Hyd.
- 6 in. At Webster St., 15 ft. N., 111/2 ft. E. of Hyd.
- 6 in. To Hyd. cor. of Gelston St., 4 ft. S. of Hyd.

BRINKMAN ST.

6 in. At Walden Ave., 5 ft. N., 9 ft. E. of Hyd.

BUSHNELL ST.

6 in. At Clinton St., 91/2 ft. N. of Hyd.

BAITZ ST.

6 in. At Clinton St., 10 ft. N. of Hyd.

B. ST.

6 in. At Mills St., 16 ft. N., 2 ft. E. of S. W. C.

BENZINGER ST.

6 in. At Reiman St., 243/4 ft. E., 221/2 ft. N. of S. W. C.

BRIGHTON AVE.

4 in. At Broadway, 47 ft. S., 11 ft. W. of N. E. C. of Kosciusko St.

BARDOL ST.

- 6 in. At Marshall St., 171/2 ft. N., 38 ft. E. of Hyd.
- 6 in. At East Parade Ave, 188 ft. S., 2 ft. W. of Hyd. opp. North Parade Ave. Dead End.

BOWEN ST.

6 in. At Sycamore St., 39 ft. N., 14 ft. E. of Hyd.

BROADWAY.

- 16 in. At Elm St., 55 ft. N., 24 ft. W. of S. E. C.
- 16 in. At Elm St., 55 ft. N., 44 ft. W. of S. E. C.
- 16 in. At Pratt St., 21 ft. W., 50 ft. S. of N. E. C.
- 16 in. At Spring St., bet. the 36 in. pipe and the 16 in., not connected with the 16 in. 23 ft. E., 37½ N. of S. W. C.

BLOSSOM ALLEY.

4 in. For Hersee Furniture Co., 9 ft. E., 231/2 S. of S. W. C. of building.

BOUCK AVE.

3 in. For Columbia Park, 349 ft. E., 22 ft. N. of Hyd. cor. of Linwood ave.

BAILEY AVE.

6 in. At Wagner's Car Shops, 3 ft. E. of meter box.

CLEMO ST.

6 in. At Norton St., 25 ft. W. of S. E. C.

CLEVELAND ST.

6 in. At Ferry St., 2 ft., S., 7 ft. E. of Hyd.

CONCORD ST.

6 in. At Curtiss St., 7 ft. N., 7 ft. W. of Hyd.

COIT ST.

6 in. S. of 36 ins. in Peckham St., 19 ft. E., 13 ft. N. of S. W. C. 6 in. N. of 36 ins. in Peckham St., 19 ft. E., 28 ft. N. of S. W. C.

C. ST.

6 in. At Mills St., 16 ft. S., 5 ft. E. of N. W. C.

CHURCH ST.

- 10 in. At Pearl St., 101/2 ft. N., 131/2 ft. E. of Hyd., on S. W. C.
- 6 in. To Hyd. S. W. C. of Delaware Ave., 11 ft. N. of Hyd.
- 6 in. To Hyd. S. W. C. of Delaware Ave., 5 ft. E. of Hyd.
- 6 in. To Hyd. S. E. C. of Delaware Ave., 12 ft. N. of Hyd.
- 6 in. To Hyd. S. E. C. of Delaware Ave., to ft. W. of Hyd.
- 6 in. To Hyd. N. W. C. of Delaware Ave., 28 ft. S. of Hyd.
- 6 in. To Hyd. N. W. C. of Delaware Ave., 51/2 E. of Hyd.
- 6 in. To Hyd. N. E. C. of Delaware Ave., 281/2 ft. S., 7 ft. E. of Hyd.
- 6 in. To Hyd. N. E. C. of Delaware Ave., 25 ft. W. of Hyd.
- 6 in. To Hyd. S. W. C. of Franklin St., 9 ft. N. of Hyd.
- 6 in. To Hyd. S. E. C. of Franklin St., 81/2 ft. N. of Hyd.
- 6 in. To Hyd. S. W. C. of Pearl St., 71/2 ft. N. of Hyd.
- 6 in. To Hyd. N. W. C. of Pearl St., 351/2 ft. S. of Hyd.
- . 6 in, To Hyd. N. W. C. of Pearl St., 15 ft. E. of Hyd.

CURTISS ST.

6 in. At Broadway, 35 ft. W., 37 ft. N. of Line of W. S. R. R. Trestle.

CLINTON ST.

- 16 in. At Fillmore Ave., 6 st. N., 59 st. W. of Hyd., on S. E. C.
- 16 in. At Lewis St., 53 ft. S., 101/2 ft. W. of N. W. C.
- 16 in. At Babcock St., 541/2 ft. S., 6 ft. W. of N. W. C.
- 6 in. To Hyd. at Fillmore Ave., 5 ft. N., 4 ft. E. of Hyd.
- 6 in. For B., N. Y. & P. Railroad Shops, 46 ft. E., 2 ft. S. of S. W. C. of the Fence.
- 6 in. For Buffalo Car Works, 62 ft. S., 283 ft. W. of N. W. C. of Babcock St.
- 6 in. For Brushes Crossing, 21 ft. E., 11 ft. N. of Hyd.
- 6 in. For Faxon St., 180 ft. E. and 9 ft. N. of Hyd.
- 16 in. At Bailey Ave., 60 ft. S., 12 ft. E. of N. E. C.
- 16 in. E. of Railroad, 8 ft. N., 417 ft. W. of Hyd. at the Brick House.
- 16 in. At Weiss St., 22 ft. N., 50 ft. E. of Hyd.
- 16 in. At South Ogden St., 101/2 ft. N., 14 ft. W. of Hyd.
- 6 in. At South Ogden St., 12 ft. N., 59 ft. E. of Hyd.
- 6 in. To 1st Hyd. E. of Bailey Ave., 3 ft. N. of Hyd.
- 6 in. To 2d Hyd. E. of Bailey Ave., 5 ft. N. of Hyd.
- 6 in. For Weiss St., South Side, 8 ft. E., 12 ft. N. of Hyd.
- 6 in. For Barnard St., South Side, 7 ft. E., 10 ft. N. of Hyd,
- 6 in. For Cable St., South Side, 5 ft. E., 10 ft. N. of Hyd.
- 6 in. For Cable St., North Side, 22 ft. E., 28 ft. N. of Hyd.
- 6 in. For Weimer St., South Side, 5 ft. E., 9 ft. N. of Hyd.
- 6 in. For Pulaski St., North Side, 24 ft. E., 25 ft. N. of Hyd.
- 6 in. For Scheu St., 32 ft. W., 37 ft. S. of N. E. C.
- 6 in. For Seifert St., 274 ft. W., 14 ft. N. of Hyd., cor. of South Ogden St.
- 6 in. At Berrick's Brick Yard, 107 ft. W., 10 ft. N. of 5th Hyd., East of Bailey
- 6 in. At Berrick's Brick Yard, 350 ft. W. 9 ft. N. of 5th Hyd., East of Bailey

COE ST.

4 in. 13 ft. N. and 18 E. ft. of S. E. C. of Main St.

DURRENBERGER PLACE.

- 4 in. At North St., 31/2 ft. E., 251/4 ft. N. of Hyd.
- 4 in. At Best St., 128 ft. W., 16 ft. S. of Hyd.

DAVY STREET.

6 in. At Ludington St., 26 ft. E., 12 ft. S. of Hyd.

DELAWARE AVE.

- 8 in. At Genesce St., 36 ft. E., 189 ft. N. of S. W. C. of Brick House.
- 8 in. At Church St., 9 ft. E., 7 ft. N. of Hyd. on N. W. C.
- 6 in. To Hyd. N. W. C. of Eagle St., 10 ft. E. of Hyd.
- 6 in. To Hyd. N. W. C. of Eagle St., 9 ft. S. of Hyd.
- 6 in, To Hyd. S. W. C. of Eagle St., 9 ft. E. of Hyd.
- 6 in. To Hyd. S. W. C. of Eagle St., 201; ft. N. of Hyd.
- 6 in. To Hyd. N. E. C. of Eagle St., 28 ft. W. of Hyd.
- 6 in. To Hyd. N. E. C. of Eagle St., 9 ft. S. of Hyd.
- 6 in. To Hyd. S. E. C. of Eagle St., 29 ft. W. of Hyd.
- 6 in. To Hyd. S. E. C. of Eagle St., 20 ft. N. of Hyd.
- 4 in. At Genesee St., 36 ft. E., 138 ft. N. of S. W. C. of building.
- 4 in. For the City Hall, 13 ft. E., 60 ft. S. of Hyd. on S. W. C.
- 4 in. At the Hebrew Synagogue, 108 ft. N., 4 ft. W. of Hyd.

DUPONT ST.

- 6 in. At Glenwood Ave., 68 ft. N., 7 ft. E. of Hyd.
- 6 in. At Ferry St., 9 ft. W., 6 ft. S. of Hyd.

DODGE ST.

6 in. For the B. G. R. C. Orphan Asylum, 10 ft. N., 168 ft. E. of Hyd. N. W. C. of Wohlers Ave.

DETROIT ST.

- 6 in. N. of 36-inch in Peckham St., 151/2 ft. E., 27 ft. N. of S. W. C.
- 6 in. S. of 36-inch in Peckham St., 151/2 ft. E., 131/2 ft. N. of S. W. C.

DINGENS ST.

- 10 in. At Bailey Ave., 14 ft. E., 22 ft. N. of Hyd.
- 10 in. At Weiss St., 53 ft. E., 31 ft. N. of Hyd.
- 6 in. For Stand Pipe, 54 ft. W., 35 ft. N. of Hyd.
- 6 in. For Machine Shop, 65 ft. E., 15 ft. N. of Hyd., between Weiss St. and Coulson St.
- 6 in. For Coulson St., 31 ft. W., 7 ft. N. of Hyd.
- 6 in. For Meter, South Side, 371/2 ft. N. of Hyd.
- 6 in. For Meter, North Side, 59 ft. N. of Hyd.

ELMWOOD AVE.

- 6 in. At Auburn Ave., 4 ft. N., 151/2 E. of Hyd., on S. W. C.
- 6 in. At Bouck Ave., 11 ft. S., 16 ft. E. of Hyd.
- 6 in. At Allen St., 27 ft. S., 1 ft. E. of Hyd.

EAGLE ST.

- 10 in. At Pine St., 42 ft. N., 213/ ft. E. of S. W. C.
 - 8 in. At Lower Terrace, 65 ft. E., 48 ft. N. of S. W. C.
 - 8 in. At Delaware Ave., 13 ft. S., 17 ft. E. of Hyd., on N. W. C.
 - 8 in. For Fire Reservoir, 11 ft. S., 79 ft. W. of N. E. C. of Morgan St.
 - 6 in. For Morgan St., 22 ft. S., 22 ft. W. of N. E. C. of Morgan St.
 - 6 in. For City Hall, 30 ft. S., 28 ft. W. of N. W. C. of the Hutchinson Block.

EMILY ST.

6 in. At Delavan Ave., 54 ft. N., 151/2 ft. E. of Hyd.

EFNER ST.

6 in. At Hudson St., 19 ft. E., 3 ft. N. of Hyd.

ELLICOTT ST.

- 6 in. At North Hampton St., 7 ft. S., 9 ft. E. of Hyd.
- 6 in. At Virginia St., N. side, II ft. E., 39 ft. N. of Hyd. on S. W. C.
- 6 in. At Virginia St., S. side, 11 ft. E., 24 ft. N. of Hyd. on S. W. C.

ELM ST.

- 36 in. At Clinton St., 46 ft. E., 2 ft. N. of N. W. C.
- 36 in. At Sycamore St., 23 ft. W., 5 ft. S. of S. E. C.
- 36 in. At Sycamore St., 60 ft. E., 5 ft. N. of N. W. C.
- 36 in. At Tupper St., 9 ft. W., 25 ft. S. of S. E. C.
- 6 in. To drain the 36-inch at Clinton St., 35 ft. E., 11 N. of N. W. C.
- 6 in. To Hyd. at Vine St.
- 6 in. To connect the 10-inch in Elm St. at Vine St., 18 ft. W. of Hyd.
- 10 in. N. of 36-inch at Sycamore St., 50 st. W., 40 st. N. of S. E. C.

ELSIE PLACE.

3 in. At Purdy St., 266 ft. N., 31 ft. E. of Hyd.

ELK ST.

- 10 in. W. of Dole St., 8 ft. N., 41 ft. E. of Hyd. W. of Dole St.
- 10 in. E. of the Creek, 49 ft. W. and 9 ft. N. of Hyd.
- 10 in. At Fisher St., 81/2 ft. N., 40 ft. F. of Hyd.
- 10 in. At Seneca St., 54 ft. S., 7 ft. E. of Hyd.

ERIE ST.

- 6 in. W. of Franklin St., 71 ft. N., 52 W. of S. E. C. of the Franklin Block.
- 6 in. North of the 8-inch in Swan St., 49 ft. direct N. of N. W. C. of the rear of House on S. W. C.

EMSLIE ST.

6 in. S. of 36-inch in Peckham St., 3½ ft. N., 10 ft. W. of Hyd., on S. E. C. 6 in. N. of 36-inch in Peckham St., 15½ ft. N., 9½ ft. W. of Hyd., on S. E. C.

FILLMORE AVE.

- 4 in. At William St., 68 ft. W., 16 ft. N. of Hyd. on William St.
- 4 in. At Peckham Street, 18 ft. W. of S. E. C.
- 6 in. At North Division St., 141 ft. N., 3 ft. W. of Hyd.
- 4 in. At North Division St., 135 ft. N., 58 ft. E. of Hyd.
- 4 in. At Seneca St., 39 ft. S. of N. E. C.
- 16 in. Peckham St., 19 ft. E., 71/2 ft. N. of S. W. C.

FRANKLIN ST.

- 8 in. At Niagara Street, 12 ft W., 44 ft. S. of Hyd. on N. E. C.
- 8 in. At Eagle Street, 12 ft. N., 20 ft. E. of Hyd. on S. W. C.
- 4 in. At Erie St., 29 ft. W., 10 ft. N. of the corner of the Franklin Block.
- 8 in. For Fire Reservoir at Niagara St., 35 ft. N., 19 ft. W. of Hyd. N. E. C. of Eagle St.
- 6 in. To Hyd. N. W. C. of Eagle St., 15 ft. E. of Hyd.
- 6 in. To Hyd. N. W. C. of Eagle St., 14 ft. S. of Hyd.
- 6 in. To Hyd. N. E. C. of Eagle St., 151/2 ft. W. of Hyd.
- 6 in. To Hyd. N. E. C. of Eagle St., 15 ft. S. of Hyd.
- 6 in. To Hyd. S. W. C. of Eagle St., 9 ft. N., 17 ft. E. of Hyd.
- 6 in. To Hyd. S. W. C. of Eagle St., 13 ft. N. of Hyd.
- 6 in. To Hyd. N. W. C. of Church St., 161/2 ft. E. of Hyd.
- 6 in. To Hyd. N. E. C. of Church St., 161/2 ft. W. of Hyd.
- 6 in. To Hyd. N. W. C. of Swan St., 211/2 ft. E. of Hyd.
- 6 in. To Hyd. N. E. C. of Swan St., 17 ft. W. of Hyd.
- 6 in. To Hyd. N. E. C. of Swan St., 5 ft. S. of Hyd.
- 6 in. To Hyd. S. E. C. of Swan St., 17 ft. W. of Hyd.
- 6 in. To Hyd. S. E. C. of Swan St., 26 ft. N. of Hyd.
- 6 in. To Hyd. 50 ft. S. of Swan St., 21 ft. E. of Hyd.

FOX ST.

6 in. S. of E. North St., 10 ft. E., 15 ft. N. of Hyd.

GLENWOOD AVE.

- 6 in. At Welker St., 11 ft. E., 28 ft. N. of Hyd. on S. W. C.
- 6 in. W. of Humboldt Parkway, 1112 ft. N., 1412 ft. W. of Hyd.
- 6 in. E. of Humboldt Parkway, 1112 ft. N., 212 ft. W. of Hyd.
- 6 in, At Jefferson St., 8 ft. N., 2012 ft. W. of Hyd.

GRANT ST.

- 6 in. At Delavan Ave., 24 ft. N., 43 ft. W. of Hyd., on S. E. C.
- 6 in. At Bird Ave., 52 ft. S., 15 ft. E. of Hyd., on N. W. C.
- 6 in. At Bird Ave., 15 ft. E., 2 in. S. of Hyd. on N. W. C.
- 6 in. At Forest Ave., 401/2 ft. W., 6 ft. N of Hyd., on S. E. C.

GILBERT ST.

6 in. At Clinton St., 91/2 ft. N. of Hyd.

GURNSEY ST.

6 in. At Farmer St., 9 ft. N., 19 ft. E. of Hyd.

GLOR ST.

6 in. At Military Road, 2 ft. N., 471/2 ft. W. of Hyd.

GRACE ST.

- 6 in. At Tonawanda St., East Side, 61/2 ft. N., 25 ft. W. of Hyd.
- 6 in. At Tonawanda St., West Side, 5 ft. N., 351/2 ft. W. of Hyd.

GARFIELD ST.

6 in. At Tonawanda St., 11 ft. N., 311/2 ft. E. of Hyd.

HIGHLAND AVE.

- 3 in. At Howard Ave., 16 ft. W., 1 ft. S. of Hyd. on S. W. C.
- 3 in. At Howard Ave., 53 ft. E., 40 ft. N. of Hyd. on S. W. C.
- 3 in. At Ashland Ave., 40 ft. N., 3 ft. W. of Hyd. on S. W. C.

TWENTY-FIRST ANNUAL REPORT OF

- 3 in. In centre of block between Richmond and Howard Ave., 275 ft. E., 6 ft. S. of Hyd. on Richmond Ave., opp. Highland Ave.
- 3 in. In centre of block between Howard Ave. and Ashland Ave., 163 ft. W., 38 ft. N. of Hyd. S. W. C. of Ashland Ave.
- 3 id. At Elmwood Ave., 81/2 ft. S., 401/2 ft E. of Hyd.
- 3 in. At Ashland Ave., 101/2 ft. N., 631/2 ft. E. of Hyd. on S. W. C.
- 3 in. In centre of the block between Elmwood Ave. and Ashland Ave., 2 ft. N., 258 ft. W. of Hyd.

NORTH HAMPTON ST.

6 in. At Main St., 40½ ft. S., 5½ ft. E. of Hyd. on N. E. C. 6 in. At Michigan St., 24½ ft. S. of Hyd. on N. W. C.

HUMBOLDT PARK ROAD.

6 in. At Kingsley St., 441/2 ft. N. and 81/2 ft. E. of Hyd.

HICKORY, ST.

6 in. N. of 36-inch in Sycamore St., 44 ft. W., 36 ft. N. of S. E. C. 6 in. S. of 36-inch in Sycamore St., 44 ft. W., 21 ft. N. of S. E. C.

HARRISON ST.

6 in. At Seneca St., 28 ft. W., 30 ft. N. of S. E. C.

HAUF ST.

6 in. At Utica St., 10 ft. N., 201/2 E. of Hyd.

6 in. At Glenwood Ave., 163/4 ft. E., 41/2 ft. N. of Hyd.

HOYT ST.

- 6 in. At Bird Ave., 62 ft. N., 91/2 ft. E. of Hyd.
- 6 in. At Forest Ave., 13 ft. N., 221/2 ft. E. of Hyd.
- 6 in. At Breckenridge St., 68 ft. S., 11 ft. E. of Hyd.
- 6 in. At Ferry St., 8 ft. N., 8 ft. W. of Hyd.

HIGH ST.

6 in. At Grey St., 13 ft. S., 3 ft. E. of Hyd.

HOWARD ST.

4 in. At Klaus & Bork Planing Mill, 6 ft. E., 32 ft. S. of E. C. of building.

IMSON ST.

6 in. At Seneca St., 281/2 ft. W., 561/4 ft. S. of N. E. C.

JONES ST.

6 in. At Clinton St., 36 ft. W. of N. E. C.

JEWETT AVE.

- 6 in. At Crescent Ave., 16 ft. E., 28 ft. S. of Hyd. on N. W. C.
- 6 in. At Parkside Ave., 9 ft. S., 52 ft. W. of Hyd.

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TWENTY-FIRST ANNUAL REPORT OF

JEFFERSON ST.

6 in. N. of 36 inch, Peckham St., 271/2 ft. W., 171/2 ft. N. of Hyd. 6 in. S. of 36 inch, Peckham St., 271/2 ft. W., 61/2 ft. N. of Hyd.

JOHNSON ST.

6 in. S. of Sycamore St., 28 ft. N., 5 ft. B. of Hyd.

JERSEY ST.

2 in. for M. E. Church, 147 ft. E., 15 ft. S. of Hyd., corner of Jersey St.

KLAUS ST.

6 in. At Metcalf Street, 171/2 ft. N., 2 ft. W. of S. E. C.

KINGSLEY ST.

6 in. At Humboldt Park, 7½ ft. N., 7½ ft. W. of Hyd. 6 in. At Wohlers Ave., 27 ft. N., 60 ft. W. of Hyd.

KIEFER ST.

6 in. At Walden Ave., 11 ft. E., 16 ft. N. of Hyd. on N. W. C. 6 in. At Genesee St., 10 ft. E., 7 ft. S. of Hyd. on S. W. C.

KRETTNER ST.

6 in. S. of 36-inch pipe in Peckham St., 15½ ft. E., 28½ ft. S. of Hyd. 6 in. N. of 36-inch pipe in Peckham St., 15½ ft. E., 14½ ft. S. of Hyd.

KEHR ST.

6 in. At Puerner Ave., South Side, 8 ft. E., 151/2 ft. N. of Hyd. 6 in. At Puerner Ave., North Side, 8 ft. E., 241/2 ft. N. of Hyd.

LAUX ST.

6 in. At Clinton St., 7 ft. E., 3 ft. S. of Hyd.

LATOUR ST.

6 in. At Walden Ave., 9 ft. E., 8 ft. S. of Hyd. 6 in. At Genesee St., 7 ft. W. of Hyd.

LOGAN ST.

6 in. At Bridgeman St., 8 st. N., 13 st. E. of Hyd.

LOEPERE ST.

6 in. At Sycamore St., 28 ft. N., 8 ft. E. of Hyd. 6 in. At Walden Ave., 9 ft. E., 10 ft. N. of Hyd.

LLOYD ST.

6 in. At Lautz Soap Works, 25 ft. S., 17 ft. W. of North Corner of Building.

METCALF ST.

6 in. At Clinton St., 9 ft. E., 46 ft. S. of Hyd.

TWENTY-FIRST ANNUAL REPORT OF

MAURICE ST.

6 in. At Perry St., South Side, 12 ft. E., 171/ ft. N. of Hyd.

MORTIMER ST.

- 6 in. N. of 36-inch in Peckham St., 7 ft. E., 34 ft. N. of Hyd.
- 6 in. S. of 36-inch in Peckham St., 7 ft. E., 21 ft. N. of Hyd.
- 4 in. In front of No. 227, 80 ft. E., 6 ft. N. of S. E. C. of Building.

MILTON ST.

- 6 in, At Seneca St., 51 ft. W., 23 ft. N. of S. E. C.
- 4 in. At Seneca St., 33 ft. W., 15 ft. N. of S. E. C.

MARSHALL ST

- 6 in. At Puerner Ave., 33 ft. W., 18 ft. N. of S. E. C.
- 6 in. At Genesee St., 13 ft. S., 5 ft. E. of Hyd.

MILLS ST.

- 6 in. At Broadway, 4 ft. E., 10 ft. S. of Hyd.
- 6 in. At Sycamore St., 41 ft. S., 13 ft. E. of N. W. C.
- 6 in. At Genesee St., 47 ft. W., 25 ft. N. of S. E. C.

MADISON ST.

- 6 in. N. of 36-inch in Peckham St., 201/2 ft. W., 40 ft. N. of S. E. C.
- 6 in. S. of 36-inch in Peckham St., 201/2 ft. W., 22 ft. N. of S. E. C.

MONROE ST.

6 in. S. of 36 inch in Peckham St., 19 ft. E., 13½ ft. N. of Hyd. on S. W. C. 6 in. N. of 36 inch in Peckham St., 19 ft. E., 27½ ft. N. of Hyd. on S. W. C.

MICHIGAN ST.

10 in. N. of 36-inch in Sycamore St., 38 ft. N., 33 ft. W. of S. E. C. 10 in. S. of 36-inch in Sycamore St., 19 ft. N., 32 ft. W. of S. E. C.

MAIN ST.

6 in. To Hydrant opposite Robie St., 3 ft. E. of Hyd. 6 in. To Hydrant, opposite Florence St., 3 ft. E. of Hyd.

NORTON ST.

6 in. At Jones St., 17 ft. N., 5 ft. E. of Hyd.

EAST NORTH ST.

- 6 in. At Durrenberger Place, 1714 ft. N., 53 ft. E. of Hyd.
- 6 in. At Sherman St., 15 ft. E., 20 ft. N. of Hyd.
- 6 in. At Herman St., 41/4 ft. N., 23/4 ft. W. of Hyd.

NEWTON ST.

6 in. At Curtis St., 7 st. N., 8 st. W. of Hyd.

NEWELL ST.

6 in. At Howard St., 92 ft. E., 16 ft. N. of Hyd.

TWENTY-FIRST ANNUAL REPORT OF

ORLANDO ST.

6 in. At Perry St., 5 ft. E., 161/4 ft. N. of Hyd.

ONEIDA AVE.

6 in. At Beitz Ave., 17 ft. N. of S. W. C.

OWAHN PLACE.

6 in. At Prenatt St., 12 ft. E., 9 ft. S. of Hyd. 6 in. At Abbott Road, 5 ft. E., 37 ft. S. of Hyd.

OAKWOOD AVE.

in. At Parkside Ave., 28 ft. S., 21 ft. E. of Manhole to the Sewer.
 in. At Summit Ave., 23 ft. E. of Manhole to the Sewer.

OAK ST.

- 12 in. S. of 36-inch pipe in Sycamore St., Dead End, 34 ft. N., 23 ft. W. of S.E.C.
- 12 in. N. of 36-inch pipe in Sycamore St., 48 st. N., 26 st. W. of S. E. C.
- 6 in. N. of Virginia St., 10 ft. E., 31 ft. N. of Hyd.
- 6 in. S. of Virginia St., 10 ft. E., 17 ft. N. of Hyd.

PERKINS PLACE.

4 in. At Dewitt St., 16 ft. N., 23 ft. E. of Hyd.

PERRY ST.

- 10 in. At Babcock St., 10 ft. E., 26 ft. N. of Hyd. on S. W. C.
- 10 in. At Walter St., 23¾ ft. N., 42½ ft. E. of Hyd.
- 10 in. At Selkirk St., 17 ft. E., 241/2 ft. N. of Hyd.
- 4 in. No. 240, 27 ft. E., 13 ft, N. of Hyd. corner of Marvin Street.

PEABODY ST.

6 in. At Perry St., South Side, 91/2 ft. E.. 21 ft. N. of Hyd.

POOLEY ST.

4 in. At Grant St., 18 ft. S., 4½ ft. W. of N. W. C. 4 in. At Dewitt St., 63 ft. E., 5 ft. S. of Hyd.

PUERNER AVE.

- Io in. At Avenue A, II ft. N., 231/2 ft. E. of Hyd.
- 10 in. At East Parade Avenue, 10 ft. N., 71 ft. E. of Hyd.
- 10 in. At Kehr St., 201/4 ft. N., 44 ft. E. of Hyd. on S. W. C.

PLAYTER ST.

- 6 in. At Broadway, 17 ft. E., 21 ft. S. of Hyd. on N. W. C.
- 6 in. At Lovejoy St., 6 ft. E., 17 ft. N. of Hyd.

PARKSIDE AVE.

- 6 in. At Jewett Ave., 12 ft. S., 18 ft. W. of Hyd.
- 6 in. At Oakwood Ave., 71/2 ft. W., 31/2 ft. S. of Manhole to the Sewer.

PECKHAM ST.

- 36 in. At Spring St., 49 ft. E., 10 ft. N. of Hyd.
- 36 in. At Monroe St., 37½ ft. N. of S. E. C.
- 36 in. At Sherman St., 41 ft. W., 28 ft. N. of S. E. C.
- 36 in. At Coit St., 271/2 ft. N., 1 ft. W. of S. W. C.
- 36 in. At Fillmore Avenue, 24½ ft. N., 5 ft. E. of S. W. C.
- 6 in. To drain the 36-inch at Spring St., 25 ft. S., 7 ft. E. of N. E. C.
- 6 in. To the Peckham St., 6 in. E. of Jefferson St., 17 ft. N., 10 ft. W. of S. E. C.
- 6 in. To drain the 36-inch at Monroe St., 2 ft. W., 29 ft. N. of S. E. C.
- 6 in. To drain the 36-inch at Emslie St., 131/2 st. N. of Hyd. on S. E. C.

- 6 in. To drain the 36-inch at Sherman St., 45 st. W., 23 st. N. of S. E. C.
- 6 in. To the Peckham St. 6 in. at Sherman St., 12 ft. W., 32 ft. N. of S. E. C.
- 6 in. To drain the 36-inch at Coit St. East Side, 33 ft. E., 191/2 ft. N. of S. W. C.
- 6 in. To drain the 36-inch at Coit St., West Side, 141/2 ft. N., 10 ft. W. of S. W. C.

PRATT ST.

- 36 in. At Sycamore St., 22 ft. W., 3 ft. N. of S. E. C.
- 36 in. At Broadway, 21 ft. W., 3 ft. S. of N. E. C.
- 10 in. N. of 36-inch in Sycamore St., 28 ft. E., 34 ft. N. of S. W. C.
- 10 in. S. of 36-inch in Sycamore St., 28 in. W., 21 ft. N. of S. E. C.
- 6 in. To drain the 36-inch at Sycamore St., 32 ft. W., 61/2 ft. N. of S. E. C.
- 6 in. To drain the 36-inch at Broadway, 32 ft. W., 9 ft. N. of N. E. C.

PINE ST.

6 in. S. of 36-inch in Sycamore St., 27 ft. W, 21 ft. N. of S. E. C. 6 in. N. of 36-inch in Sycamore St., 26 ft. W., 40 ft. N. of S. E. C.

EAST PARADE AVE.

10 in. At Genesee St., 14 ft. W., 54½ ft. N. of Hyd. 10 in. At Puerner Ave., 64 ft. E., 2 ft. N. of Hyd.

NORTH PARADE AVE.

4 in. At East Parade Ave., 12 ft. W. of Hyd.

REIMANN ST.

6 in. At Gold St., 1614 ft. N., 21/2 ft. E. of Hyd. on S. W. C.

ROHR AVE.

6 in. At Walden Ave., 1712 ft. E., 14 ft. S. of N. W. C.

9 in. At Genesee St., 9 ft. E., 8 ft. S. of Hyd.

ROETZER AVE.

6 in. At Walden Ave., 18 ft. E., 6 ft. S. of N. W. C. 6 in. At Genesee St., 8 ft. E., 8 ft. S. of Hyd.

ROEHRER AVE.

6 in. At North Hampton St., 11 ft. S., 8 ft. E. of Hyd. 6 in. At Dodge St., 45 ft. N., 23 ft. E. of Hyd.

RHODE ISLAND ST.

4 in. At Smith Planing Mills, 17 ft. N., 33 ft. E. of S. E. C. of building.

SHERMAN ST.

6 in. S. of 36-inch in Peckham St., 33 ft. W., 13 ft. N. of S. E. C. 6 in. N. of 36-inch in Peckham St., 29 ft. N., 33 ft. W. of S. E. C. 36 in. At Peckham St., 27 ft. W., 11 ft. N. of S. E. C. 36 in. At Peckham St., 29 ft. N., 15 ft. W. of S. E. C. 36 in. At Howard St., 14 ft. E., 11 ft. S. of N. W. C.

STANTON ST.

6 in. S. of 36-inch in Peckham St., 121/2 ft. N., 161/2 ft. E. of S. W. C. 6 in. N. of 36-inch in Peckham St., 161/2 ft. E., 27 ft. N. of S. W. C.

SHUMWAY ST.

6 in. S. of 36-inch in Peckham St., 17 ft. E., 13 ft. N. of S. W. C. 6 in. N. of 36-inch in Peckham St., 17 ft. E., 28 ft. N. of S. W. C.

SMITH ST.

6 in. S. of 36-inch in Peckham St., 22 ft. E., 12 ft. N. of S. W. C. 6 in. N. of 36-inch in Peckham St., 24 ft. E., 27 14 ft. N. of S. W. C. 4 in. At Zeller's Tannery, 106 ft. N., 29 ft. E. of Hyd.

SPRUCE ST.

6 in. S. of 36 inch in Sycamore St., 29 ft. E., 19 ft. N. of S. W. C. 6 in. N. of 36 inch in Sycamore St., 29 ft. E., 41½ ft. N. of S. W. C.

SOUTH DIVISION ST.

10 in. At Michigan St., 10 ft. N., 6½ ft. W. of Hyd. on S. E. C.
10 in. At Pine St., West Side, 13 ft. N., 4 ft. E. of Hyd.
10 în. At Pine St., East Side, 15 ft. N., 24½ ft. W. of Hyd.
6 in. At Cedar St., 13½ ft. N., 12½ ft. E. of Hyd. on S. W. C.

SUMMER ST.

6 in. At Richmond Ave., 9 ft. S., 18 ft. E. of S. E. C. of the Curb Line of Richmond Ave.

EAST SUMMER ST.

6 in. At Ellicott St., 27 ft. N. of Hyd. on Hyd. on S. E. C. 6 in. At Michigan St., 24 ft. N., 25 ft. E. of S. W. C.

SUMNER ST.

6 in. At Walden Ave., 3 ft. N. and 13 ft. E. of Hyd.

SYCAMORE ST.

- 36 in. At Michigan St., 58 ft. W. of 23 ft. N. of S. E. C.
- 36 in. At Spruce St., 211/2 ft. N., 121/2 ft. E. of S. W. C.
- 10 in. At Oak St., 33 ft. S., 21 ft. W. of N. E. C.
- 4 in. At Oak St., 31 ft. N., 241/2 ft. W. of S. E. C.
- 24 in. At Michigan St., to drain the 36 in., 54 ft. W., 11 ft. N. of S. E. C.
- 10 in. At Ash St., 37 ft. W., 39 ft. N. of S. E. C.

SPRING ST.

- 6 in. At Broadway, S. of 36-inch, 23 ft. E., 27 ft. N. of S. W. C.
- 6 in. Between the 36-inch and the 8-inch at Hollister St., 19 ft. W., 7 ft. S. of Hydon N. E. C.

SCOVILLE AVE.

6 in. At Clinton St., 91/2 ft. N. of Hyd.

SEARS ST.

6 in. At Lovejoy St., 13 ft. E. of S. W. C.

ST. STEVANS' PLACE.

6 in. At the Abbott Road, 8 ft. E., 434 ft. S. of Hyd.

SENECA ST.

- 10 in. At Dole St., 9 ft. N., 50 ft. E. of Hyd.
- 10 in. At Bailey Ave., 12 ft. N., 40 ft. E. of Hyd.
- 12 in. At Elk St.
- 4 in. At Larkin's Soap Factory, 8 ft. E., 21 ft. N. of corner of the building.
- 6 in. At No. 956, 186 st. E., 16 st. N. of Hyd., E. of Erie Railroad.

SWAN ST.

8 in. At Franklin St., 11 ft. S., 16 ft. W. of Hyd. on N. E. C. 8 in. For Fire Reservoir, no box.

TOWNSEND ST.

6 in. S. of 36-inch in Peckham St., 2014 ft. E., 1514 ft. N. of S. W. C.
6 in. N. of 36-inch in Peckham St., 2014 ft. E., 28 ft. N. of S. W. C.

TITUS AVE.

6 in. At Broadway, 34 ft. S., 25 ft. W. of N. E. C.

TONAWANDA ST.

4 in. At Farmer St., 7 ft. N., 18 ft. E. of Hyd on S. W. C. 4 in. At Austin St., 15 ft. E., 13 ft. N. of S. W. C. 16 in. At Hertle Ave., 12 ft. N., 40 ft. E. of Hyd.

UNION ST.

4 in. At Eagle St., 11 ft. S., 15 ft. E. of Hyd.

UNION PLACE.

3 in. At York St., 17 ft. S., 19 ft. W. of N. E. C.

UTICA ST.

6 in. At Humboldt Parkway.

VINCENNES ST.

6 in. At Mackinaw St., 26 ft. E., 26 ft. N. of S W. C. 6 in. At South St., 173/ ft. E., 141/ ft. S. of Hyd.

VIRGINIA ST.

- 20 in. At Main St., 15 ft. S., 15 ft. W. of N. E. C.
- 20 in. At Washington St., 14 ft. S., 3 ft. W. of N. E. C.
- 6 in. To Hyd. N. W. C. of Washington St., 31/2 st. S. of Hyd.
- 6 in. To Hyd. N. E. C. of Washington St., 5 ft. S. of Hyd.
- 6 in. To Hyd. S. W. C. of Washington St., 12 ft. E., 19 ft. S. of Hyd.
- 6 in. To Hyd. S. E. C. of Washington St., 8 ft. N. of Hyd.

WAVERLY ST.

6 in. At Puffer St., 61/2 ft. N., 91/4 ft. W. of Hyd. S. E. C.

WILSON ST.

- 6 in. At William St., 171/2 ft. N., 11 ft. E. of Hyd.
- 6 in. Peckman St., 13 ft. N., 18 ft. E. of S. W. C.
- 6 in. At Peckham St., 18 ft. E., 36 ft. N. of S. W. C.
- 6 in. At Lovejoy St., 17 ft. E., 13 ft. S. of Hyd. S. W. C.
- 6 in. At Lovejoy St., 18 ft. E., 2 ft. S. of N. W. C.
- 6 in. At Broadway, 15 ft. E., 2 ft. N. of S. W. C.

WOODLAWN AVE.

6 in. Humboldt Park Road, 131/2 st. N., 5 st. W. of Hyd. S. W. C.

WINSLOW AVE.

6 in. Humboldt Park, 101/2 ft. N., 171 ft. of Hyd. on East Parade Ave.

TWENTY-FIRST ANNUAL REPORT OF

WASSON ST.

6 in. At Seneca St., 23 ft. E., 48 ft. S. of N. W. C.

WINONA ST.

6 in, At Elk St., 17 ft. E. of N. W. C.

WASMUTH AVE.

6 in. At Walden Ave., 9 ft. E., 17 ft. S. of Hyd. 6 in. At Genesee St., 6 ft. E., 7 ft. S. of Hyd.

WALTER ST.

6 in. At Perry St., South Side, 141/2 ft. E., 20 ft. N. of Hyd.

WATSON ST.

6 in. S. of 36-inch in Peckham St., 8 ft. E., 20 ft. N. of Hyd. S. W. C. 6 in. N. of 36-inch in Peckham St., 8 ft. E., 33 ft. N. of Hyd. S. W. C.

WALNUT ST.

6 in. N. of 36-inch in Sycamore St., 46 ft. W., 26 ft. N. of S. E. C. 6 in. S. of 36-inch in Sycamore St., 46 ft. W., 17 ½ ft. N. of S. E. C.

WILLIAM ST.

10 in. W. of 36-inch in Sherman St., 25 ft. N., 15½ ft. E. of S. W. C. 10 in. E. of 36-inch in Sherman St., 21 ft. E., 25 ft. N. of S. W. C.

WEAVER ALLEY.

6 in. At Virginia St., 4 ft. E., 24 ft. N. of Hyd. Dead End. 6 in. At Virginia St., 4 ft. E., 17 ft. N. of Hyd.

WASHINGTON ST.

6 in. At Virginia St., N. S., 28 ft. E., 6 ft. S. of N. W. C.

12 in. At Virginia St., S. S., 28 ft. E., 20 ft. S. of N. W. C.

12 in. At Goodell St., 27 ft. E. of N. W. C.

Two 6-inch for Hyd. N. W. C. of Burton Alley, 9 ft. E. of Hyd., 11 ft. S. of Hyd.

Two 6-inch for Hyd. S. W. C. of Burton Alley, 16 ft. N. of Hyd., 11 ft. E. of Hyd.

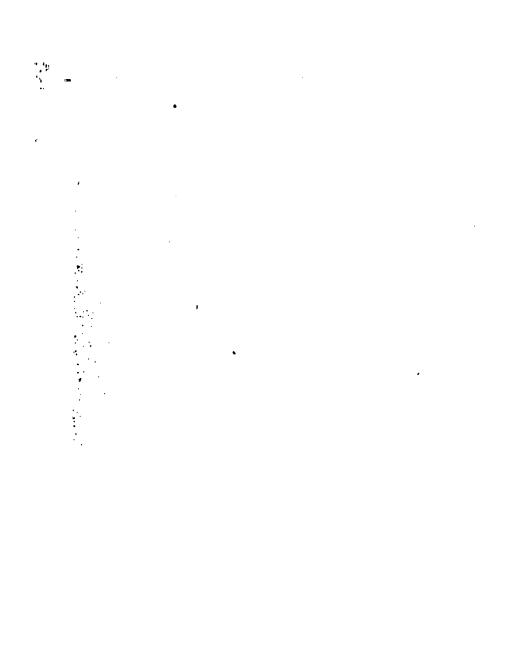
Two 6-inch for Hyd. N. E. C. of Burton Alley, 19 ft. W. of Hyd., 12 ft. S. of Hyd.

Two 6-inch for Hyd. S. E. C. of Burton Alley, 24 ft. W. of Hyd., 15 ft. N. of Hyd.

4-inch For Weyand's Brewery, 20 ft. E., 81 ft. N. of N. W. C. of Burton Alley.

6-inch Fire Reservoir at Goodell St., 22 ft. S., 23 ft. E. of N. W. C.

4-inch At Corinne Lyceum, 2 ft. N., 29 ft. W. of N. E. C. of Building.



• . . 1/



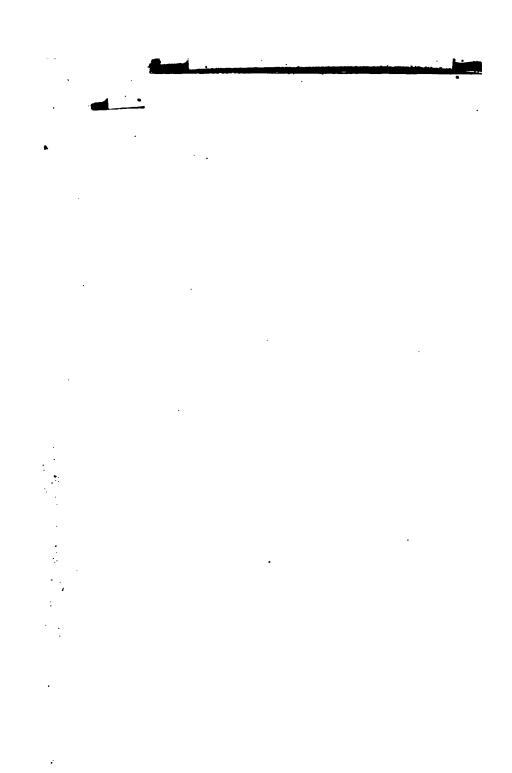
I Cost rr Foot.

Foreman.

M. Byrne.

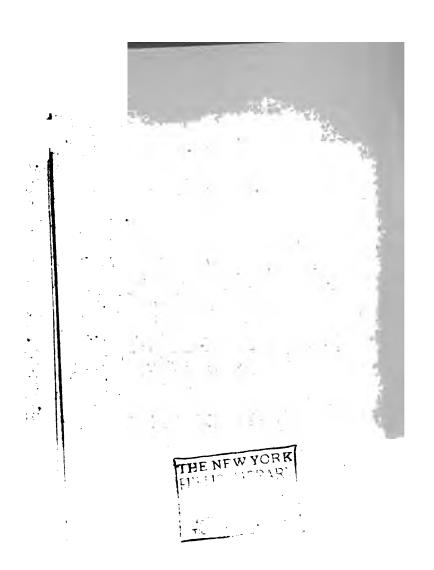
[J. Miller.

F. Schwartz. \$.86 J. Quinn.
M. Byrne.
M. Byrne. . .81 .93 M. Byrne.
M. Byrne.
F. Schwartz.
M. Byrne.
F. Sullivan.
M. M. Hollenbeck.
M. M. Hollenbeck. 1.05 ., 2.17 . .04 . .76 . 1.70 M. Byrne.
M. Hollenbeck.
J. Quinn.
M. Byrne. .77 1.70 .87 .83 .87 M. Byrne.
F. Schwartz.
M. Byrne.
M. Byrne.
J. Miller.
F. Sullivan. 1.47 .91 .90 .59 .79 1.14 .55 F. Sullivan M. Byrne. M. Byrne. M. Byrne. J. Miller. J. Miller. J. Miller. J. Miller. J. Miller. M. Byrne. M. Byrne. F. Schwart .04 .90 .8o.61 .7 I .05 .58 .96 1.63 F. Schwartz. M. Byrne. 2.40 . . .72 M. Byrne. . .55 F. Sullivan,



nc	.A'			Remarks.										
* t	ch.	16 Inch.	20 Inch.	36 Inch.										
·	³ 85 ₂		\$4.11	\$8.68			•.			•		•		
•		\$2.74	! • • • ! • • •	9.07	٠.	•	•	٠	•	٠	٠	٠	٠	
	o									•	:		:	
:		2.78	• • •	8.34			•							
		2.38		• • •	٠	•	٠.	٠	•	٠	٠	٠	٠	
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ï	· <u>-</u> .				_	_								
10	03 19 ⁵ 5	\$2.55 2.57	\$4.11 3.21	\$8.72 9.72			:				•	•	•	
;	165	\$0.02	\$ 0.90	\$1.00		•	:	•	:		•	•	:	

Hes



PUMPING DEPARTMENT, 1889.



PUMPING DEPARTMENT.

PUMPING ENGINES, AND THEIR CAPACITY PER 24 HOURS.

I. Lower House.

Engine No. 1, Worthington,	. 10,000,000 gallons.
" 2, "	. 15,000,000 "
" " 3, "	. 15,000,000 "
" " 4, Gaskill,	
" " 5, "	
IN COURSE OF CONSTRUC	CTION.
Engine No. 6, Gaskill,	. 20,000,000 gallons
II. Upper House. (Distr	ibuting).
Engine No. 2, Holly,	6,000,000 gallons.
" "I, "Reserve,	3,000,000 "
Water pumped, 1889,	16,451,247,645 "
" " 1888,	
Increase, 1889,	

DAILY SUPPLY.

The average daily supply for the year 1889, was forty-five million seventy-one thousand nine hundred and eleven gallons, an increase of two million four hundred and eighty-one thousand eight hundred and sixty-nine gallons over the previous year.

68 TWENTY-FIRST ANNUAL REPORT.

This is a daily consumption of 173 gallons per capita, (260,000).

On the following days, the greatest and least amounts were pumped:

GREATEST AMOUNT PUMPED.

Wednesday, February 6th Thursday, February 7th, Monday, February 25th, LEAST	• • •		64,365,940 *
Sunday, May 5th, Sunday, May 12th, Sunday, June 2d,	• • • •	• • • • •	36,150,080 "

ENGINE HOUSE FUEL STATEMENT.

RECEIVED.

Coal on hand January 1, 1889,	9,066 tons.	
Coal received during 1889,	7,417 "	
Natural gas consumed for fuel to dis-		
place coal, equal to 8,427 tons,	8,427 "	
		24.910 tons.

CONSUMED.

Coal consumed for all purposes,	7,553 tons.	
Natural gas consumed to displace	•	
coal, equal to 8,427 tons,	8,427 "	
		15,980 tons.
On hand January 1, 1890,		8,930 tons.

ENGINE RECORD, 1889. - WORTHINGTON ENGINE, No. 1.

er.	II P. M.	304 555.22 555.33 5	-
Thermometer,	3 A. M.	35.16 5.67 5.67 5.63 5.33 5.33 5.33 5.33 5.33 5.33 5.33	*
Th	7 A. M.	31.0.54 31.0.74 32.0.74 32.0.74 68.3.56 39.56 37.9	:
Value of	Fuel.	\$620.00 5594 40 5594 40 258616 310.06 279.05 401.30 383.10 881.86 881.86 504.21 438.27	55,992.62
Duty.		49,302,813 47,956,219 48,080,043	
Ashes.		58,176 50,816 50,765 8,530	200,839
II.	Lbs.	400 1,600 1,600 800	400
Coal	Tons.	159	965
Gauge.	In.	0 WH : 8 4 W 4 F ; 4 W	*
Below (Feet.	888111111888	
Pres-	Water	23333333333333	
Water Pumped.	Gallons.	204,802,000 190,180,700 179,492,400 71.301,400 88,842,600 86,237,300 139,845,700 81,090,100 213,508,900 252,612,000 144,473,000 131,964,900	1,784,351,000
Run,	Mio.	33.30.30	20
Time	Hrs.	597 5212 5242 237 4607 590 590 3666	5,131
Water,	Feed	04114444444	1
.edl ,mı	Ascne	***********	10
'sql 'w	Stead	244444444444	
Date.		fanuary	Fotal;

ENGINE RECORD, 1889.—WORTHINGTON ENGINE, No. 2.

N N N N N N N N N N N N N N N N N N N	i.c.	Time Run,		Water Pumped.	Pres- ne, lbs,	Below G	Gauge.	Coal	al.	Achee	Date	Value of	Th	Thermometer,	-
	Feed	Hrs.	Min.	Gallons.	Water	Feet.	In.	Tons.	Lbs,	Tanina.	· Grand	Fuel.	7 A. M.	3 P. M. 11 P. M.	11 P. M.
98 98	140	705	50	380,859,900	51	20	500	314	200	109,044	47,835,430	1,221.80	29.64	35.16	30.04
56 26	40	648		388,398,200	32	21	I	316		104,805	48,902,710	1,229.24	20.74	27.	55 22
26	140	735		396,323,200	32	20	7	326	*	115,280	46,825,820	1,268.14	31.	40.87	31.3
26	40	619		342,440,800	32	20	4	138	1,200	46,994		1,068.48	40.2	56.76	41.65
	40	949		366,011,000	32	20	1					1,130 00	54.3	63.	55:3
25 1	40	664	30	80	32	61	9					1,060.14	62.7	72.	63.8
25	40	363	30	191,846,600	32	61	9					592.80		86.	73.74
26	40	241		650	32	61						400.62		82.77	68,32
26	40	163		88,800,500	32	20	2					276.39	62.73	75.50	63.8
					1	*	* *						45.86	53.3	46.
	40	311		151,601,300		20	7	* * *	* * *			468.44	39.56	47.43	41.83
56	140	742		408,273,000	32	20		288	* * *	82,488		1,274.98	37.9	43.74	37-3
1	1	808	1 5	28.8 2	1	1	1	1 280 1 400	1,400	258 611		So not or			

ENGINE *RECORD, 1889.—WORTHINGTON ENGINE, No. 3.

996	.edi ,n	edl ,m	Walet,	Time R	Run.	Water Pumped.	Pres-	Below	Gauge.		Coal.	Achae	į	Value of	Th	Thermometer.	er.
	Steam	nnoe _A		Hrs.	Min.	Gallons.	Water	Feet,	In.	Tons.	Lbs,	Tonico.	. cany.	Fuel,	7 A. M.	3 F. M.	H.P. M.
anuary	45	26	140	624	30	331,767,900	32	20	'n	280		96,972	96,972.846,693,530	1,090.60	29.64	35.16	30.4
ebruary	45	25	140	672	į	392,743,300	32	61	9	330	1,800	109,960	46,3	1,287.12	20.74	27.55	22.
March	45	56	140	269	30	375,198,000	32	20	00	316		115,280	47.347,237	1,229.24	31,	40.87	31.3
pril	45	56	140	720	:	387,847,300		20	4	100	800	37,530		1,201.25	40.2	\$6.76	41.65
lay	45	56	140	669	25	378,213,700	13	20	2	6	1,600	3,080		1,245.74		63.	55.3
une	45	56	140	216	30	347,772 400	32	61	9	19	400			1,199.86	62.7	72.	63.8
uly · · ·	45	56	140	149		354,205,200	32	16	1					1,212.00		.98	73.74
August	45	56	140	736	30	393,247,700	32	19	10					1,356.69		82.77	68.32
september.	45	56	140	664	30	347,755,330	32	20		4				1,199.72	62.73	75.50	63.8
ctober	45	56	140	739		361,376,900	22	20	90	33				1,246.75	45.86	53.3	46.
November.	45	36	140	720		353,782,300	32	20	50		1000			1,220.54	39.56	47.43	41.83
December .	45	36	140	409	-	214,214,800	35	20	oc	135	1,400	29,485	46,279,520	940.50	37.9	43.74	37.3
Total .			1:	8.065	Y	4.238.124.830			(3	1.106	009	302.307		14.420.01			

ENGINE RECORD, 1889.—GASKIIL ENGINE, No. 4.

4	II P. M.	30.4 30.4 31.3 31.3 63.8 63.8 63.8 63.8 63.8 73.74 74 75 75 75 75 75 75 75 75 75 75 75 75 75	2
Thermometer.	3 P. M.	35.16 27.55 56.76 77.2 77.2 82.77 77.5 53.3 3.74	1
Th	7 A. M.	29.64 33.0.2 553.36 68.3 62.73 62.73 70.5 68.3 77.14	
Value of	ruel.	\$1,366.63 \$1,366.63 1,102.77 1,250.99 776.77 841.92 1,288.38 1,159.29 1,24.27 1,24.27 1,24.27 1,26.39	12,317.97
Dury.		81,865,434 88,711,648 711,868,358	****
Ashes		114,949 77,022 94,365 108,570 39,610 14,278 77,992	526,786
al.	Lbs.	1,000 1,000 1,000 1,000 80 80	400
Coal	Tons.	351 283 283 321 127 37	1,625
Gauge.	In.	4 00 4 w , c NO 00 4	-
Below C	Feet.	89948 848988	*
Pres-	Water	25,555 52 5555	-
Water Pumped.	Callons.	391,752,645 295,808,260 363,519,460 378,369,020 221,516,650 239,29,490 367,059,980 336,283,060 357,059,740 331,729,740 331,729,740	3,604,433,435
Run,	Min.	30	25
Time Run,	Hrs.	744 518 673 720 416 744 720 720 733	7,203
Water, rees.	Feed	1996 1997 1998 1998	
.sql 'mı	Vacuu	22222 : 22222	-
"sql 'u	Steal	22422 . 42222	-
Date		January	Total

ENGINE RECORD, 1889.—GASKILL ENGINE, No. 5.

	'sql 'o	sql 'm	Water, rees,	Time Run.	Zun.	Water Pumped.	Pres-	Relow	Gauge.	Coal.	al.	Achae	-	Value of	T.	Thermometer,	er.
Date	Steam	Vacuu		Hrs.	Min.	Gallons.	Water	Feet.	II.	Tons.	Lbs.	Conco	· Grand	Fuel.	7 A M.	3 P. M.	M, II P, M.
anuary		:		172	30	111,736,020	33	25	9	77	500	14,171		\$ 275.02	29.64	35.16	30.4
February .	20	27	126	530	30	301,980,500	32	26		239	1,800	80,662	169'06'06	854.12	20.74	27.55	22.
March	75	28	120	248	*	125,261,780	99	25	S	IIO		35,261			30.	40.87	31.3
April	65	28	120	124	30	75,618,040		24	21						40.2	56.76	41.65
May	65	27	120	464	40	183,819,620	32	25	00	163	450			_	54.3	63.	55.3
une	65	27	120	719	;	413,404,190	65	25	1	327	800			1,165.70	627	72.	63.8
inly	20	27	120	740	30	460,101,100		25		343	1,200	119,355			70.5	.98	73.74
August	45	26	120	744	:	442,212,700	9	25	00	328	I,000			1,200.48	68.3	82.77	68.32
September	65	27	120	720	:	382,137,950	9	26	4	286	9	89,369	98,383,685		62.73	75.50	63.8
October	65	27	120	740		397,117,400		56		291	1,600	84,275	÷		45.86	53	3.46
November	9	27	120	711	30	364,574,650		56	9	283	800	78,034		1,008.38	39.56	47.43	41.83
December	65	27	120	739	:	379,079,430		56	7	303		891,16		-	31.9	43.74	37.3
Total.,	:	1		6,554	10	3,637,043,380				2,754		750 858,835		\$9,995.50			:

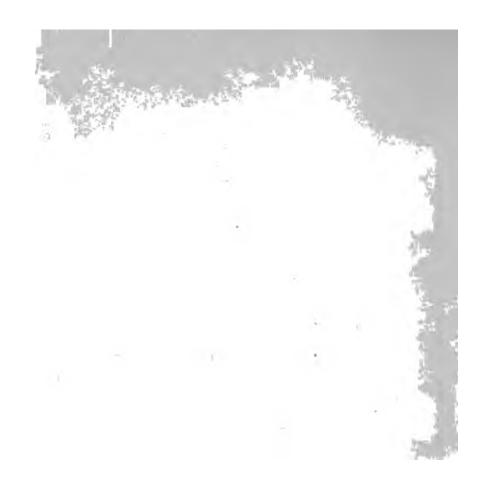
ENGINE RECORD, 1889.—HOLLY ENGINE No. 2.

u	Wate	Time R		lime Run. Water Pumped.	Pres- ure, lb	Below Gauge	Gauge-	ა 	Coal			Ē	3	Value of	F 	Thermometer.	i.
Ляспп	Feed Deg	Hrs.	Min. –	Gallons	Water	Feet.	Ē	Tons.	Lbs.		 i	1	;	Fuel.	7 A. M.	3 P. M.	11 A. M.
26	105	27		008.393.45.1	· .					•				\$ 502.55	29.64	35.16	30.4
56	190	77		150,974,280	8	•		•	•	•	•	•	:	665.79		27.55	22.
5 6	195	57		104,592,420	8		•	•	•	•	-:	•	:	725.85	31.	40.87	31.3
5 6	195	54	:	146,203,080	૭	•		•	· -	•		•	:	644.85		56.76	41.65
5 6	195	77	•	153,249,600	8		•	•	:	:			•	665.10		63.	55.3
56	195	77		122,976,840	8	•	•	:	•	:	:	:	:	533.71		72.	63.8
56	961	77		148,134,20c	8		_	•	•	•	•	:		642.91		. 98	73.74
20	195	57		142,00,6,120	8	•		•	•	:			•	616.69		82.77	68.32
5 6	195	5		140,000,590	_	•		•	•	· -			•	610.26		75.50	63.8
56	195	5 7		134.543,460	ક	:	•	•	•	:	:	•	:	583.91		53.3	46.
5 6	195	57		49.736 400	હ	•	_	:	•	:	:	:	:	215.85		47.43	41.83
56	195	24		66,880,280	8	:	<u>:</u>	· ·	:	<u>:</u>	:	:	•	290.26	37.9	43.74	37.3
- 1				:	:					. '	ļ			1			•
		288		1 663.262.070					:	_			•	\$6.787.67	•		

PIPE SCHEDULE

COMPLETE TO

December 31st, 1889.



Schedule of Water Pipe loid in the City, string Location, Size of Pipe, and on what System.

EAST SIDE.

Street,	From	L ·	Size of Pipe, Inches.	System.	Location of Pipe.
Abbot road Abbot road Adams Adams Adams Adams Alabama Alabama Alabama Alabama Alabama Alabama Alabama Alabama Alabama Babock	Fillmore avenue. Smith Smith Smith Eagle Clinton William Brown Seneca Mackinaw South Perry Urban alley Broadway Genesee Rohr Cienesse Fillm re avenue William Elk Clinton Marshal. Broadway Geneswelling	Mill 1,350 feet easterly Elk Clinton William Brown Genesee Carroll Sandusky Erie R. k Mackinaw Scott 300 feet easterly Railroad Broadway Person Ferry Mills Clinton Clinton Clinton Erie R. R Kehr Kehr Kehr Kehr Kehr Kehr	 Φο Θο ο δο 4ο ο ο ο ω 4ο δο ο Θο ο ο ο ο 	HXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	33 ft. s. of n. line. 25 ft. n. of s. line. 25 ft. n. of s. line. 26 ft. n. of s. line. 27 ft. e. of w. line. 19 ft. e. of w. line. 14 ft. w. of e. line. 18 ft. w. of e. line. 23 ft. w. of e. line. 31 ft. w. of e. line. 33 ft. w. of e. line. 34 ft. w. of e. line. 15 ft. n. of s. line. 45 ft. w. of e. line. 35 ft. w. of e. line. 36 ft. n. of s. line. 37 ft. w. of e. line. 38 ft. w. of e. line. 36 ft. n. of s. line. 37 ft. w. of e. line. 38 ft. w. of e. line. 36 ft. n. of s. line.
Bennett	William	Broadway	 > 4 -	-	e. of w.

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Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.	
Benzinger	Ludington	Loveiov	9	B	24 ft. w. of e. line.	ne
Benzinger	Reimonn	King	9	2	or fi e of m	1
Berlin	High	Best	9	H	26 ft. e. of w. 1	line
Best	Main	Masten	9	Н	25 ft. s. of n. l	ine
Best	lefferson	Grape	4	Н	17 ft. n. of s. 1	ine.
Best	Jefferson	Fox	IO	H	24 ft. n. of s. l	line.
Best	Fox	Genesee	90	Н	23 ft. n. of s. l	line.
Blossom alley	Huron	Broadway	4	R	w.	line,
Bond	Clinton	Howard	4	×	18 ft. w. of e. 1	line.
Boston alley	Tupper	Virginia	4	H	7 ft. e. of w. l	line,
Bowen	Broadway	Sycamore	9	R	29 ft. e. of w. l	line,
Bowen	Walden avenue	Sycamore	9	H	. of w.	line.
Brighton avenue	Broadway	Chatham	m	×	ě	ine
Brinkman	Walden avenue	Rohe	0	H	w. of e.	line.
Bristol	Spring	Jefferson	9	~	of n.	line.
Bristol	Emslie	Lord	4	×	s. of n.	ine.
Bristol	Smith	Raze	9	×	s. of n.	line.
Broad way	Lafayette	Ellicott	9	×	s. of n.	ine
Broadway	Ellicott.	Pratt	91	×	s of n.	ine
Broadway	Pratt	Spring	36	×	s. of n.	line
Broadway	Pratt	Fillmore avenue	01	×	s. of n. l	ine
		77 8		1	S. OI D.	me.
Broadway	Sherman	Smith	4	*	n. of S.	ine
Broadway	Fillmore avenue	Bailey avenue	Ito	×	of s.	inc
Broadway	Bailey avenue	N. V. C. R. R.	12	K	57 ft. n. of s. l	ine
Brown	Adams	Jefferson	20	K	20 ft. n. of s. l	ine
Bundy alley	Sycamore	350 feet northerly	4	K	12 ft. w. of e. 1	ine
Richard		The state of the s				į

Burton alley	Ellicott	Boston alley	4 H	ft. s. of n.
	Ralph alley	Michigan	4 H	s jo .u .y
	Scott	Perry	4 R	ft. e. of w.
C	Fillmore avenue	Mill	9 8	ਛਂ
Camp	Genesee	Sycamore	6 R	ft. w. of e.
Carlton	Main	Mulberry	H 9	ft. s. of n.
Carlton	Mulberry	Lemon	Н 9	ft. s. of n.
Carlton	Lemon	Genesee	Н 9	ft. s. of n.
Carroll	Washington	Michigan	9 8	₩
Carroll	Michigan	200 feet west of Chicago	4 R	ft. n. of s.
Carroll	200 feet west of Chicago	160 feet west of Chicago	1 1/2 K	ft. n. of s.
Carroll	Chicago	Louisiana	6 R	ä
Carroll	Louisiana	Alabama	*	ft. s. of n.
Carroll	Heacock	400 ft. e. of Van Rensselaer	4 X	ft. s. of n.
Carroll	Hydraulic	Reservation line	4	st. of n.
Carroll	Heacock		4 X	نے
Cavuga	lefferson	Grev	Н 9	ft. n. of s.
Cedar	Swan	Broadway	9 R	ft. w. of e.
Central avenue	William	Loveiov	8 R	ft. w. of e.
Center	Seneca			ft. w. of e.
Cherry	Mıchigan			24 ft. n. of s. line.
Chester	Glenwood avenue	Puffer		ft. w. of e.
Chicago	Seneca	northerly		ft. e. of w.
Chicago				ft. w. of e.
Chicago				fr. e. of w.
Chippewa				ft. n. of s.
Clark				ft. e. of w.
Clemo				f. e. of w.
Clifford	Smith			ft.n.ofs.
Clinton		Madison 3		ft. s. of n.
Clinton	Washington			ft. s. of n.]
Clinton	Oak	Union		نے
Clinton	Union			ft. s. of
•	Emslie	Fillmore avenue		نے
	Fillmore avenue		16 R	42 ft. s. of n. line.
Clinton	Lewis	Babcock I	_	, 13 ft. n. of s. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,	From	ď.	Size of Pipe, Inches,	System,	Location of Pipe.	,
Clinton	Babcock	South Ogden	91	2	s, of n.	line.
Clinton	South Ogden	City line	9	2	n.	line.
Coit	Howard	Broadway	9	2	e. of w.	line.
Columbia	Perry	Elk	0	2	14 ft. w. of e.	line.
Columbia	Ohio	Buffalo river	16	× :	w. of e.	line.
Concord	Variation	W. D. K. K	0 0	23	0. 01 S.	line.
Curties	Pronductor	Concord	2	2	of w	ine
Cypress	Michigan	Pine	0.00	2	s. of n.	line.
Davey	William	Loveiov	9	×	e	line.
Davis	Conocae	Tefferson	*	~	#	line.
					n. of S.	line.
Depot	William	North line of lot 58	9	×	w. of c.	line.
Deshler	Broadway.	I, roo feet southerly	9	×:	w. of e.	line,
Detroit	William	Broadway	0	H	. of w.	line,
Dingens	Bailey avenue	3,200 feet easterly	10	K	n. of 8.	line.
Dodge	Main	Jefferson	9	H	n. of s.	line.
Dodge	Jefferson	300 feet e. of Wohlers street	9	H	s. of n.	line.
Dupont	Utica	Ferry	9	Н	w. of c.	line.
Durrenberger place	High	Best	4	11	e. of w.	line.
Eagle	Fine	Emslie	0	×	n. of s.	line.
Eagle	Bond	Smith	9	R	s. of n.	line.
Eagle	Main	Pine	Io	×	26 ft. s. of n.	line.
Eagle	Smith	Fillmore avenue	9	R	8	line.
East Bennett	Clinton	450 feet northerly	**	K	24 ft. w. of e.	line.
East Bennett	William	Clinton	4	×	24 ft. w. of c.	line.
East Market	Scott	Perry	+	K	W.	
East Market	Perro	Pulton	4	a	To ft. w. of e.	line

East Parade	Genesee	Puerner avenue lo	_	19 ft. w. of e. line.
East Summer	Ellicott	Michigan 6	_	ft. s. of n.
Eaton	Michigan	Masten 6	_	f.
Eaton	Masten	•	H	
Elk	Ohio	ji ic		ft.s. of
Elk	Columbia	•		
Elk	Michigan	:		ft. s. of n.
Elk	Babcock	Seneca	_	of n.
Ellicott	Exchange	•		ft. e. of w.
Ellicott	:	550 feet northerly 4		15 ft. w. of e. line.
Ellicott	550 feet north of Chippewa.	•	H - 0	15 ft. w. of e. line.
Ellicott	Tupper	southerly	~ ~	
Ellicott	Tupper		H - 0	
Ellicott	Goodell	Goodrich	H ,	27 ft. e. of w. line.
Ellicott	Goodrich		H	
Ellicott	Best	Dodge	H	
Ellicott	Dodge		_	25 ft. e. of w. line.
Ellicott	Clinton		_	27 ft. e. of w. line.
Ellicott	Seneca	Clinton Ic	_	40 ft. w. of e. line.
Ellicott	Broadway	Genesee 10	_	26 ft. e. of w. line.
Elm	Clinton	Tupper 36		
Elm.	Genesee		_	21 ft. e. of w. line.
Elm.	Tupper	High	_	of e.
Elm	North			ft. e. of w.
Elm	Swan	• • • • • • • • •		25 ft. e. of w. line.
Elmslie	Seneca	/ay		31 ft. e. of w. line.
Elsie place	Alexander	Purdy	H C	18 ft. n. of s. line.
Euclid place		Frenatt.	× .	35 it. e. of w. line.
Euclid place	Prenatt	oad		8 ft. e. of w. line.
Exchange	Main		_	ft. n. of s.
Exchange	Washington	Michigan 6	_	ft. n. of s.
Exchange	Jefferson		_	ft. n. of s.
Exchange	Jefferson		_	ft. n. of s.
Exchange	Main	Washington 12	H 4	52 ft. n. of s. line.
Exchange.	Heacock			ft. n. of s.
Exchange	Smith	Selkirk	н —	It. n. of s.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street	From	To	Pipe, Inches.	System	Location of Pipe.
Ferry	Main	600 feet e. Jefferson	12	Н	39 ft. s. of n. line
illmore avenue	Seneca	W. N. Y. & P. R. R.	4	-R	15 ft. w. of e. line
Fillmore avenue	Seneca	Peckham	91	R	18 ft. e. of w. line
fillmore avenue	William	Peckham	4	×	15 ft. e. of w. line
illmore avenue.	Peckham	Broadway	91	×	20 ft. e. of w. line
illmore avenue	Genesee	Sycamore	91	Н	84 ft. w. of e. line
Fillmore avenue	Sycamore	Broadway	9	×	16 ft. w. of e. line
illmore avenue	Α	C	9	H	21 ft. w. of e. line
itzgerald	Elk	Sandusky	9	×	22 ft. w. of e. line
Florida	Main	600 feet easterly	4	Н	15 ft. n. of s. line
Folsom	Michigan	Chicago	4	K	-
Folsom	Chicago	South Cedar	*	×	of s.
Folsom	South Cedar	Jefferson	9	K	of s.
Fougeron avenue	Avenue A	Belt line	9	H	39 ft. s. of n. line
Fox	Genesee	Sycamore	9	×	40 ft. e. of w. line
Fox	Genesee	North	9	×	28 ft. w. of e. l
Fox	Broadway	Sycamore	9	×	39 ft. e. of w. line
Fulton	Michigan	Louisiana	9	×	36 ft. s. of n. li
Fulton	Hamburgh	L. S. & M. S. R. R	9	2	24 ft. n. of s. line
Fulton	Van Rensselaer	Erie Railway	9	×	27 ft. n. of s. line
Fulton	Louisiana	Hamburgh	9	×	24 ft. n. of s. line
Fulton	Smith	Railroad	9	×	20 ft. n. of S. l
Canson	South Michigan	320 feet northerly	91	4	7 ft. w. of e. l
Ganson	South Michigan	1.760 feet southerly	91	×	To ft. w. of e. l
Ganson	320 ft. north of S. Michigan.	640 feet northerly	10	K	7 ft. w. of e. l
Carfield	Ludington	Lovejoy	.9/	R	41 ft. w. of e. l
Catchell	Broadway	W. S. R. R.	9	H	18 ft. e. of w. I
au-	Michigan	Dating		0	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -

Genesee	Main	Oak		
Jenesee	Michigan	Jefferson	_	ιń
renesee	Jefferson	Best	II or	n. of s.
Genesee	Best	Bailey avenue		s. of n.
denesee	Michigan	Oak	_	s. of n.
George	Mortimer	Jefferson	4 X	n. of s. l
erhardt	Dodge	Northampton	9	22 ft. e. of w. line.
Jerman alley	Sycamore	Genesee	4 \	. of w.
ibson	Curtiss	Lovejoy	9 - K	. of w. l
ilbert	Clinton	Oneida	6 R	*. of e.
irard place	Humboldt parkway	Avenue A	H — 9	26 ft. n. of s. line.
ilenwood avenue	Main	Purdy	H 9	n. of s.
lenwood avenue	Purdy	Brooklyn	H 9	n. of s. 1
Jenwood avenue	Humboldt parkway	250 feet west	_	. of n.
ploi	William	Broadway	9 R	w. of e.
poodell	Main	Michigan	12 H	40 ft. s. of n. line.
Goodell	Michigan	Cherry	R	n. of 3.
poodell alley	Tupper	Goodell	- + H	. of w.
oodrich	Main	Michigan	H 9	n. of s.
oodyear avenue	Broadway	450 feet northerly	6 R	of w.
orham	Elk	Perry	9 R	w. of e.
ranger	Chicago	Ohio Basin Slip	4 R	s. of n.
rape	Cherry	Virginia	6 R	*. of e.
grape	High	Best	H 9	w. of e.
rape	Virginia	Carlton	6 R	25 ft. w. of e. line.
.rape	Carlton	High	H 9	e. of w.
	Michigan	Beak	_	n. of s.
Grey	Broadway	Genesee	_	w. of e.
Grey	Carlton	High	_	18 ft. e. of w. line.
iniliord	Broadway	Sycamore		34 ft. w. of e. line.
uillord	Best.	Genesee		≥. of w.
Hamburgh	Elk	Fulton		w. of e.
Hamburgh	Exchange	Elk		w. of e. l
Hamburgh	EIK	South	10 R	23 ft. w. of e. line.
Tariow place	Furdy.	Alexander place	_	22 ft. n. of s. line.
narwood place	Jefferson	End of street	H 9	14 ft. n. of s line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,	From *	To	Size of Pipe, Pipe, System, Inches, System	Location of Pipe.
Hauff	Utica	Glenwood	Н 9	w Jo a
ayward.	Elk	Fulton	6 R	e. of w.
ayward	Perry	250 feet northerly.	6 R	w. of e.
yward	Fulton,	Perry	6 R	w. of e.
eacock	Seneca	Scott	4 R	e. of w.
eacock	Exchange	Репу		w. of e.
Herman	Broadway	North	6 R	jo
Herman	North	Best		e. of w.
fickory	Cherry	Genesee		e. of w.
Hickory	Genesee	Eagle		w. of e.
High	Main	Jefferson		s. of n.
gh	Jefferson	Grey		n. of s.
nckley	Spring.	Mortimer		s. of n.
Tirschback	Broadway	W. S. R. R.		32 ft. w. of e. line.
Hollister	Spring	Mortimer	_	s. of n.
Howard	Jefferson	Madison,	_	s. of n.
Howard	Monroe	Adams		n. of s.
ward	Madison	Monroe,		n. of s.
ward	Adams	Sherman street		37 ft. s. of n. line.
ward	Madison	Metcalfe	_	s. of n.
ward	Sherman	Shumway	_	s. of n.
ward	Smith	Raze		n. of s.
ward	Shumway	Smith.		8. of n.
Howard	Metcalfe	Babcock		s. of n.
ward	Metcalfe	Stetson	_	s. of n.
mboldt parkway	Utica	Ferry	H 9	e. of w.
Humboldt parkway	Northampton	Kingsley	H 9	e, of w.
1000	Washington	Chall		

ft. s. of n.	25 it. w. of c. line.	ft. w. of e.	ft. w. of e.	17 ft. w. of e. line.	14 ft. s. of n. line.	12 ft. s. of n. line.	21 ft. e. of w. line.	38 ft. w. of e. line.	18 ft. e. of w. line.	18 ft. w. of e. line.	ft. e. of w.	18 ft. w. of e. line.	35 ft. w. of e. line.	30 ft. e. of w. line.	30 ft. e. of w. line.	28 ft. w. of e. line.	43 ft. w. of e. line.	37 ft. w. of e. line.	ټي	15 ft. s. of n. line.	21 ft. n. of s. line.	30 ft. w. of e. line.	45 ft. w. of e. line.	39 ft. w. of e. line.	of w. l	To fe a of we line	ft. e. of w.		20 ft. e. of w. line.	11 ft. w. of e. line.	e. of w.	ft. n. of s.	I 7 II. n. oi s. line.
24 5	2 24	×	≃.	~	~	×	×	×	×	×	×	~	×	×	Ξ	H	Ξ	Ξ	H	Ξ	×	I,	x	æ	×	2	; ≃	Ξ	×	Η	Η	= :	4
36	40	9	4	၁	9	4	9	•	4	0	4	4	9	20	9	0	91	91	91	m	4	9	9	9	4	9	9	9	9	4	9	9	0
Oak	Perry	Perry.	Mary	Ohio	Montgomery	Fillmore avenue	William	100 feet north of George	Sycamore	400 feet north of George.	Davis	Davis	Brown	Virginia	High	Best	Ferry	Puffer	Main	End of alley	Fillmore avenue	Best	North	Clinton	425 feet northerly	426 feet southerly	Erie Railway.	Fougeron	Ottawa	High	Genesee	Humboldt Park	Jones
Main	Elk.	Scott	Perry	Mary	Lord	Montgomery	Exchange	William	100 feet north of George.	100 feet north of George.	Sycamore	Sycamore	Davis	Brown	Virginia	High	Best	Ferry	Puffer	Jefferson	Raze	North.	Broadway	Lyman	Sycamore	- Senere	Elk	Genesee	St. Clair	Carlton	Walden	Jefferson	Metcalle
Huron	Illinois	Illinois	Indiana	Indiana	James	James	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson, e. s dewalk	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson	Jefferson alley	Jerry	Johnson	Johnson	Jones.	Kane	Kane	Katherine	Kehr	Kentucky	Ketchum alley	Kiefer	Kingsley	Niaus

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33 ft. w. of e. line.
30 ft. e. of w. line.
30 ft. e. of w. line.
20 ft. e. of w. line.
33 ft. s. of n. line.
31 ft. e. of w. line.
21 ft. e. of w. line.
22 ft. w. of e. line.
22 ft. w. of e. line.
28 ft. e. of w. line.
28 ft. w. of e. line.
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32 ft. w. of e. line.
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36 ft. w. of e. line.
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38 ft. w. of e. line.
36 ft. w. of e. line.
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38 ft. w. of e. line.
36 ft. w. of e. line.
37 ft. w. of e. line.
38 ft. w. of e. line.
39 ft. w. of e. line. ft. e. of w. line. Location of Pipe, Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System. Size of Pipe, Inches. rovejoy.... 270 feet southerly. . Howard. . . . Fillmore avenue Hamburgh Canal Walden avenue. To Bailey avenue Sweet Lovejoy . . . Avenue A. . . Genesee . . Masten . . Eagle. . . Norton . Broadway Norton . Masten . North. . City line. William . tailroad Seneca Across Hamburgh Canal. South Division . . Williamsville road Emslie . . . Central avenue. Fillmore avenue From Washington . Garfield. . . loward. . . efferson. . . Broadway . Metcalte. . Michigan . Curtiss. . . Fitzgerald . Broadway. Broadway . Clinton . . Cherry . . Clinton . . Broadway. Cherry . . Walden . efferson Seneca . William. Clinton . Street. Ludington yman . . . Kosciuszko, Krettner . . Loepere . . andon . . afayette . ouisiana. ouisiana. ovejoy. . voleyo. atonr . . aurel . . aux nomaaurel . . ord. . . Mackinaw ester . . .ocust . . Krettner ewis . ewis . oveloy ovejoy ord.

25 ft. n. of s. line. 24 ft. s. of n. line. 21 ft. w. of e. line. 31 ft. e. of w. line. 50 ft. w. of e. line.	49 ft. w. of e. line. 48 ft. w. of e. line. 47 ft. e. of w. line.	33 it. w. of e. inte. 74 ft. e. of w. line. 16 ft. w. of e. line. 28 ft. w. of e. line.	w. of e. w. of e. w. of e.	12 it. n. of s. line. 20 ft. e. of w. line. 17 ft. e. of w. line. 33 ft. w. of e. line. 19 ft. e. of w. line.	17 ft. e. of w. line. 18 ft. s. of n. line. 23 ft. w. of o. line. 24 ft. e. of w. line. 27 ft. e. of w. line. 32 ft. e. of w. line. 42 ft. w. of e. line. 16 ft. n. of s. line. 16 ft. w. of e. line. 30 ft. w. of e. line.
2000000 		15 16 16 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	40000 AHXHII		6 6 6 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Hamburgh. Fitzgerald. Brown. Howard. Prime. Exchange	North Division	High South line of Poorhouse lot. Virginia.	Gay. Puerner Perry Dodge.	Mortuner. Elk. Prenatt William. William.	Best. Hamburgh. Chicago Gencago Goodell High Ferry Railway Genesec
Louisiana Sidway Fagle Clinton Ohio	Exchange North Division Goodell		William	Seneca Seneca Howard Howard Howard	Genesee. Louisiana Ohio Ohio Genesee. 120 feet north of Goodell High Best Hacock Sycamore Broadway

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Street		From		P	Size of Pipe, Inches,	System,	Lecation of Pipe.
Milton	. Wes	Wescott	:	Seneca	9	×	22 ft, e. of w. line.
Milton	. Seneca			L. V. R. R	4	R	Io ft. e. of w. lir
Minton	. Smith.	т		Selkirk	9	R	32 ft. n. of s. lir
Mississippi	. Ohio			Elk	4	R	Iq ft. w. of e. lir
Mississippi	. Elk			Mary	**	K	19 ft. w. of e. lir
Mississippi	. Mary	A		Perry	4	K	19 ft. w. of e. lin
Mississippi	. Perry .	Y		Scott	9	R	19 ft. w. of e. lir
Mohawk	. Was	Washington		Ellicott	9	K	31 ft. n. of s. lir
Mohr	Bros	Broadway		Grimes	9	×	21 ft. e. of w. lir
Monroe	. Clin	Clinton		Brown	9	R	34 ft. w. of e. li
Monroe	, Clin	Clinton		Eagle	9	R	32 ft. w. of e. lir
Montgomery	. How	Howard		Pink	9	K	16 ft. w. of e. lin
Montgomery	Jam	ames			61	R	18 ft. e. of w. lii
Moore	. Elk.			Delaware & Lack. R. R.	69	K	7 ft. w. of e. lin
Mortimer	. Cherry	ту		Broadway	9	×	32 ft, w. of e. lir
Mortimer	. Wil	William		495 feet north of Peckham.	9	R	32 ft. w. of e. lin
Mulberry	Goo	oodell		Carlton	9	H	39 ft. w. of e. lin
Mulberry	. Hig	High		North	9	H	27 ft. e. of w. lin
Mulberry	. Car	Carlton		High	9	H	43 ft. w. of e. li
Newton	. Cur	Curtiss		W. S. R. R.	9	×	15 ft. n. of s. lin
Newell	. Hov	Howard		300 feet north	9	M	17 ft. e. of w. li
Nichols alley	. Seneca	3Ca		200 feet northerly	4	×	7 ft. e. of w. line
North	. Main .	a		Michigan	9	H	ft. s. of n.
North	. Mic	Michigan		Locust	9	H	ft. s. of n.
North	. Rose .			Grape	9	H	ft. s. of n.
North	. Grape.			Orange	9	H	ft. s. of n.
North	. Locust	ust		Orange	9	H	39 ft. s. of n. line
North	Rose		100	Toffarana	-		

Herman 6 H 33 ft. s. of n. line. Masten 6 H 43 ft. s. of n. line. Masten 6 H 20 ft. n. of s. line.	A	R 24 ft. n. of s.	16 R 35 ft. s. of n.	6 R 18ft.n. of s.	36 ft. s. of n.	de 4 H 19 st. of n.	R 35 ft. e. of w.	R 38 ft. s. of n.	R 17 ft. n. of s.	23 ft. e. of w.	16 ft. e. of w.	13 ft. w. of e.	6 H 13 ft. w. of e.	11a	6 H 29 ft. e. of w.	6 H 15 ft. w. of e.	K 26 ft. e. of w.	6 R 43 ft. s. of n.	outh of Chicago . 6 R 40 ft. n. of s.	 t northerly 10 R 37 ft. e. of w.	6 R 24 ft. n. of s.	44 ft. s. of n.	6 K 17 ft. n.	25	Н 9	6 R 17	southerly 4 R		6 R 12 ft. e.	
Northampton Durrenberger Northampton Jefferson Northampton Main		North Division [efferson		Division	North Division Michigan	• • • • • • •	North Ogden Lovejoy	Norton Lewis	1	• • • • • • •			Oak Tupper	• • • • • • • • • • • • • • • • • • • •	Oak Virginia	• • • • • • • • • • • • • • • • • • • •			-············			• • • • • • • • •		• • • • • • • •	• • • • • • • • • • • • • • • • • • • •		Orlando Elk	Otto Hayward	Owahn Place Abbott road	

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	e e	Size of Pipe, Inches, System,	Location of Pipe.
Peach	Carlton	High	9	27 ft. e. of w. line
Peach	North.	Best	H 9	34 ft. w. of e. line
Peach	High.	North.	9 H	40 ft. e. of w. line.
Peckham	Iefferson	Fillmore avenue	6 R	33 ft. n. of s. line
Peckham	lefferson	Fillmore avenue	36 R	18 ft. n. of s. line
Perry	Main	Mississippi	6 R	45 ft. n. of s. line
Perry	Columbia	Michigan	6 R	12 ft. s. of n. curb.
erry	Marvin	Heacock	6 R	29 ft. n. of s. line
Perry	Heacock	Erie Railway	12 R	23 ft. s. of n. line
Perry	Smith	Babcock	IO R	24 ft. s. of n. line.
Perry	Smith	Erie Railroad	12 R	24 ft. s. of n. line.
Perry	Gorham	Winona	6 R	21 ft. n. of s. line
Pine	Eagle	William	6 R	20 ft. w. of e. line
Pine	William	Sycamore	4 R	26 ft. w. of e. line
Pine	Eagle	North Division	IO R	21 ft. e. of w. line
Pine	North Division	Swan	16 R	21 ft. e. of w. line
ink	Lord	Montgomery	6 R	10 ft. n. of s. line
Playter	Broadway	Lovejoy	6 R	18 ft. e. of w. line
Porter	Van Rensselaer	Hydraulic	6 R	32 ft. s. of n. line.
Porter	Van Rensselaer	Heacock	6 R	33 ft. n. of s. line
Potter	William	Broadway	9 R	18 ft. e. of w. line
Pratt	Clinton	William	4 8	37 ft. w. of e. line
Praft	Eagle	Clinton	6 R	25 ft. e. of w. line
ratt	William	Genesee	6 R	e. of w. 1
Pratt	Sycamore	Broadway	36 R	28 ft. w. of e. line
renatt	Euclid place	Owahn place	. B	24 ft. n. of s. line
uerner	Ave. "A"	Belt line	H or	38 ft. s. of n. line
D. War	Wafe	Taffarence (1	

18 ft. e. of w. line. 15 ft. w. of e. line. 33 ft. w. of e. line. 33 ft. w. of e. line. 33 ft. w. of e. line. 14 ft. e. of w. line. 15 ft. e. of w. line. 17 ft. n. of s. line. 22 ft. w. of e. line. 32 ft. w. of e. line. 17 ft. s. of n. line. 22 ft. w. of e. line. 17 ft. s. of n. line. 22 ft. w. of e. line. 18 ft. e. of w. line. 18 ft. e. of w. line. 18 ft. e. of w. line. 19 ft. n. of s. line. 19 ft. n. of s. line. 19 ft. n. of s. line.	ft. n. of s. ft. n. of s. l. ft. e. of w. l. ft. e. of w. l. w. of w. lt. n. of s. ft. s. of n. lt.
IIXXXXXXXXXXIIIIIXXIIXX	XXXXXXXXXXXXX
0 +10000 4000 40000000 4000 40	ü u o o 4 o o o o u
End of street Virginia 200 feet southerly James James James James James James James Jerry Fulton Scott Genesee Sycamore Gold 375 feet easterly Best. Main Jefferson Soo feet easterly Northampton Genesee Carlton High North Genesee Stanislaus Too feet westerly	nouth of Exchange. northerly
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alle nn n av vay ald n	enss l
Utica	Michigan Van Renssel Clinton Peckham Seneca Clifford Clifford Main Louisiana
	Z > O B O B O S I S
Ralph alley Randall Raze Raze Raze Raze Raze Red Raze Red Red Red Red Red Red Red Red Red Re	Scott Scott Scott

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

vi	Street				From		To Sie of Pipe.	System.	1 (1)	Location of Pipe.	
Seneca		100		1-0	Michigan	1	Main	2	-	20 ft. n. of s.	ine
Seneca					Fillmore avenue		Elk	B		16 ft. n. of s.	ine
Sevmour					Bond		Lord	S	_	22 ft. s. of n.	ine
Seymour	3				Emslie		Hagerman	R		22 ft. n. of s.	ine
Seymour					Hagerman		320 feet westerly 4	R		32 ft. s. of n.	ine
Sherman					Howard		Peckham36	5 R		12 ft. w. of e.	ine
Sherman					Howard	:	North	5 R		20 ft. e. of w.	ine
Sherman			1		North	:	Best 6	9 H		20 ft. e. of w.	ine
Shepard					Broadway	:	W. S. R. R 6	5 K	_	33 ft. w. of e.	line
Shumway					William:	:	Peckham 6	S R		33 ft. w. of e.	line
Shumway		٠			Broadway	:	Peckham 6	8 R		34 ft. w. of e.	line
Shumway					Howard	1	William 6	6 R		18 ft. e. of w.	line
Sidway					Elk	:	Mackinaw 6	5 R		16 ft. w. of e.	line
Smith					Abbott road	:	Elk 10			20 ft. w. of e.	line
Smith			1		Abbott road	:	St. Stephen's place 6	6 R		35 ft. e. of w.	line
Smith		6			Elk	:	Seneca 16	6 R		18 ft. e. of w.	line
Smith					Howard	:	Oneida 6	8 B		33 ft. w. of e. l	ine.
Smith					Howard	:	Peckham 6	8 8		17 ft. e. of w.	line
Smith					Lovejoy		Peckham 6	8 R		33 ft. w. of e.	line
Smith					Lovejoy		Broadway 6	8 B		23 ft. w. of e.	line
Smith			-		Clinton	:	Bristol 6	5 R	-	16 ft. e. of w.	
Sobieski					Broadway		Stanislaus 6	8 B	-	17 ft. e. of w.	ine
Sommer					Seneca	:	125 feet southerly	2 K		24 ft. e. of w.	ine
South					Louisiana	:	Ohio	8 R		22 ft. s. of n.	line
South		1	16		Louisiana	1	Hamburgh,	S R		20 ft. s. of n.	
Southampton					Michigan		Masten	H 9	77	Ao ft. s. of n.	ine
Southampton	i				Jefferson	4	Masten	H 9	77	20 ft. 8. of m.	ě
outh Codar					Seneca	7	Swan	2	100	12 ft a nf w	1

24 ft. n. of s. line. 24 ft. n. of s. line. 24 ft. n. of s. line.	ft. n. of s.] ft. s. of n. l	ft. e. of w. ft. w. of e.	25 ft. e. of w. line.	ft. w. of e.	ft. w. of e.	it. w. of e. ft. w. of e.	18 ft. w. of e. line.	ft. s. of n.	ft. s. of n ft. e. of w.	ft. w. of e.	22 ft. e. of w. line.	ft. n. of s. 1	ft. s. of n.	20 ft. n. of s. line.	ft. w. of e.	ft. e. of w.	ft. n. of s.	ft. s. of n. 1	نے ہے	ft. n. of	42 ft. n. of s. line. 26 ft. s. of n. line.
***	24 24 1	* # ;	x x	x x	~ c	* *	x x	=	≡∝	2	% =	: ≃	~ :	4 4	H	2	24 24	4 24	×	~ (* *
9 9 9	99	တွေ	0 4 -	· • ∞ •c	44	_ o	_ o c	4	9 9	9	9 9	•	2	၀ ၀	9	9	36	3 4	4	. 9	9
	· · ·				•				•	- : :	•	 · · ·	:			•		· · ·	 : :	•	
N. Y. C. R. R N. Y. C. R. R South Cedar	Pine	Peckham	Genesee Broadway	William	Eagle	Peckham	Broadway Loveiov	300 feet easterly	624 feet westerly St. Thomas place	Sycamore	Broadway	Jefferson.	Ellicott	Seneca	Gennesee	Kent	Fratt	Jefferson	Beckwith	Johnson	Sperman Fillmore avenue
Cedar. Emslie	Chestnut	William	Cherry	Broadway	Clinton	Howard.	Lovejoy.	Main	Oak	Genesee.	Sycamore	Spring	Main	Cedar.	Best	Stanislaus	Oak	Spring	Jefferson	Adams	Sherman
South Division. South Division South Division	South Division	Spring	Spring	Spring	Spring	Stanton.	Stanton.	St. Paul	St. Paul	Strauss	Strauss.	Superior	Swan	Swan	Sweeney	Sweet avenue	Sycamore.		Sycamore.	Sycamore	Sycamore

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,		From	To	Size of Pipe, Inches,	System	Location of Pipe.
ycamore		Fillmore avenue	Lathrop	20	×	23 ft. n. of s. line
Fennessee		South	Erie Railroad	9	×	w Jc
Fennessee		Mackinaw	Tecumseh	9	×	3
Fitus		Broadway	Harrison	9	R	to ft e. of w. line
Chomas		Howard	William	9	×	18 ft. w. of e. line
Thomas		Howard	Metcalfe	9	×	32 ft. e. of w. line
Townsend		Lovejoy	William	٥	×	33 ft. w. of e. line
Fownsend		Lovejoy	Broadway	9	K	33 ft. w. of e. line
Troupe		Seneca	Railroad	9	×	of w. 1
Tupper		Main	Washington	12	н	24 ft. s, of n, line
upper		Main	Michigan	20	K	8.
upper.		Washington	Michigan	9	×	17 ft. n. of s. line
ousey		Sycamore	Champlin	4	×	25 ft. w. of e. line
Union		Eagle	Clinton	4	×	7
Jaion		Clinton	William	9	×	e
Jtica		Main	Jefferson	9	H	· .
Jtica		Jefferson	Dupont	9	H	2
Utica		Dupont	Humboldt parkway	9	H	41 ft. s. of n. line
/andalia		South	Railroad	4	×	22 ft, e. of w. line
Vandalia		Mackinaw	Sandusky	9	*	21 ft. w. of e. line
Van Rensselaer		Seneca	Porter	4	×	20 ft. w. of e. line
Van Rensselaer		Seneca	Elk	9	2	20 ft. w. of e. line
Vary		Spring	Jefferson	*	2	21 ft. s. of n. line
Vincennes	,	Mackinaw	175 feet southerly	9	K	25 ft. e of w. line
Vincennes		South	245 feet northerly	9	×	25 ft. e. of w. line
/ine		Elm	Oak	ch	×	28 ft. n. of s. line
Virginia		Main	Oak	30	H	25 ft. 8, of n. line
irginia		Tefferson	Channe	-	2	

Schedule of Water Pipe laid in the City, groing Location, Size of Pipe, and on what System.

Location of Pipe.	14 ft. e. of w. line. 20 ft. e. of w. line. 17 ft. w. of w. line. 39 ft. w. of e. line. 22 ft. n. of s. line.
System.	REMET
Size of Pipe, Inches.	00000
To	William. 300 feet southerly. Perry Northampton. Humboldt parkway.
From	Sycamore Broadway Elk Dodge Avenue A
Street,	Wilson

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

WEST SIDE.

			:	
Street	From	Ę ·	Size of Pipe, Inches.	Location of Pipe.
		•	-	
Albany	Niagara	West avenue	≃ .9	40 ft. n. of s. line.
Albany	West avenue.	Hampshire	. 9	24 ft. n. of s. line.
Allen	Main	Wadsworth	24 11	50 ft. n. of s. line.
Amherst	Main	Colvin	112 11	28 ft. n. of s. line.
Amherst	Niagara	Military road	x 9	50 ft. s. of n. line.
Amberst	Military road	N. Y. C. R. R.	<u>بر</u> و	ft. s. of n.
Anderson place	Richmond avenue	Ashland avenue	9	38 ft. s. of n. line.
Anderson place	Ashland avenue	Elmwood avenue	II . 9	یے
Annie place	DeWitt	250 ft. east	9	34 ft. s. of n. line.
Annie place	Grant.	Tryon	H 9	17 ft. n. of s. line.
Arkansas	West avenue	Herkimer	H 9	22 ft. n. of s. line.
Arkansas	Herkimer	Grant	H 9	44 ft. s. of n. line.
Arlington place	North.	Park	H 9	3 ft. w. of e. line.
Ashland avenue	Bryant.	Summer	H 9	40 ft. w. of e. line.
Ashland avenue	Bryant	Bouck avenue	H 9	25 ft. e. of w. line.
Auburn avenue	West avenue.	Niagara	 4 	27 ft. s. of n. line.
Auburn avenue	Grant	Elmwood avenue	H 9 -	24 ft. n. of s. line.
Austin	Niagara	Tonawanda	10 R	40 ft. s. of n. line.
Austin	Niagara	Bridge	2 R	•
Balcom	Main	Michigan	H 9	41 ft. n. of s. line.
Balcom	Michigan	Linwood avenue	H 9 -	24 ft. s. of n. line.
Barker	Main	75 feet westerly	4 H	
Barton	Breckenridge	120 feet southerly	2 2	5 ft. w. of e. line.
Barton	Arkansas	California	H 9	27 ft. e. of w. line.
Baynes	Ferry	Bouck avenue	H 9	22 ft. e. of w. line.
Bean alley	Huron	170 feet southerly	_ - አ	5 ft. e. of w. line.

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43 ft. s. of n. line.
38 ft. n. of s. line.
45 fr. s. of n. line.
32 ft. w. of e. line.
20 ft. s. of n. line.
25 ft. s. of n. line.
24 ft. n. of s. line.
35 ft. w. of e. line.
35 ft. s. of n. line.
37 ft. s. of n. line.
38 ft. n. of s. line.
38 ft. s. of n. line.
39 ft. s. of n. line.
30 ft. s. of n. line. of n. line Location of Pipe. Schedule of Water Pipe laid in the City, giving Location, Sise of Pipe, and on what System. Size of Pipe, Inches. 250 ft. west of Ashland ave Jelaware avenue. Howard avenue Delaware avenue Dewitt Herkimer . . . 210 feet easterly Howard avenue To West avenue. Herkimer . . Commercial . Main Rhode Island Chandler . . Massachusetts Railroad . . Herkimer . . Hopt . . . Rhode Island Dewitt . . Webster . . Sarton . Richmond avenue Elmwood avenue. Richmond avenue. Richmond avenue Prospect avenue . belaware avenue inwood avenue West avenue . . From Herkimer . . West avenue. Dewitt Barton . . . Rhode Island Cleveland . . Erie Canal. Herkimer . . Westavenue Niagara. . Niagara . . Amherst . . Dewitt . . Niagara . . Vermont. /ermont loyd. Niagara Street Souck avenue . . souck avenue . . Souck avenue . . Bouck avenue. Breckenridge . Breckenridge . Breckenridge . Breckenridge. Bird avenue . rayton . . . Breckenridge . Bird avenue . Bryant, S. S. Bryant, N. S. Bryant, N. S. Breckenridge Bridgeman . alifornia. remen.. . arolina . Brayton . Bryant . . Butler . . Canal . . arolina . Canal . . Carolina

Carolina	Niagara	Prospect avenue	6 - R	35 ft. s. of n. line.
	Lot line bet. lots 171 and 172	280 feet west of Morgan.	4 %	
Chapin parkway	Coldinal avenue	Delenan avenue	07	off, w. of c. line.
Chenango	Utica	Ferry	9	
Chippewa	Franklin	Georgia	9 8	n. of s
Chippewa	Main	Franklin	H 9	31 ft. n. of s. line.
Church	Pearl	Terrace	10 R	70 ft. s. of n. line.
Church	Lower Terrace	Jackson	6 R	40 ft. s. of n. line.
Churchill	Amherst	Austin	≃	18 ft, w. of e. line.
Cleveland avenue	Delaware avenue	Elmwood avenue	E 9	16 ft. s. of n. line.
Cleveland	Ferry	Breckenridge	H 9	20 ft. e. of w. line.
Clifton place	Cottage	Norris place	4 ==	16 ft. w. of e. line.
Clinton avenue	Niagara	West avenue	ે સ	24 ft. s. of n. line.
Clinton avenue	West avenue	Herkimer	ن بح	23 ft. s. of n. line.
Clinton avenue	Herkimer	Richmond avenue	20 II	24 ft. n. of s. line.
Clinton avenue	Richmond avenue	Chapin parkway	20 11	37 ft. s. of n. line.
Clinton avenue	Chapin parkway	500 fect easterly	H 9	40 ft. s. of n. lme.
College	Cottage	North	H ·	31 ft. e. of w. line.
Commercial	Terrace	Water	9 X	48 ft. e. of w. line.
Congress	Clinton avenue	Delavan avenue	9	23 ft. e. of w. line.
Connecticut	Niagara	Prospect avenue	20 11	27 ft. n. of s. line.
Connecticut	Prospect avenue	Fargo avenue	-	1 15 ft. s. of n. line.
Connecticut	Fargo avenuc	West avenue	H 9	Ė
Connecticut	West avenue	Plymouth avenue	11 91	
Connecticut	Plymouth ave	Richmond avenue	9	ä
Cottage	Mariner	Hudson	10 H	n. of s. l
Court	Main	Terrace	36 R	30 ft. n. of s. line.
	Main	Pearl	H 9	52 ft. n. of s. line.
	Morgan	Terrace	9 8	35 ft. n. of s. line.
	Wilkeson	Georgia	4 դ	43 ft. n. of s. line.
Crescent avenue	Jewett avenue	End of street	9	23 ft. e. of w. line.
Danforth	Forest avenue	Bradley	9	38 ft. e. of w. line.
Dart.	Forest avenue	Bradley	+ - ×	25 ft. e. of w. line.
Dayton	Main	Prime	≠	39 ft. n. of s. line.
Dearborn	Amherst	350 feet northerly	6 . R	25 ft. e. of w. line.

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Street,		-	From	To-	Size of Pipe, Inches.	System.	Location of Pipe.
Dearborn			Parish	Hertel avenue	9	2	40 ft. w. of e. line.
Jelavan			Grant,	Tryon place	9	×	41 ft. s. of n. line.
lelavan avenue			Chapin parkway	goo feet west	9	H	22 ft. n. of s. line.
elavan avenue			Chapin parkway	300 feet easterly	*	K	20 ft. s. of n. line.
Jelavan avenue	*		Chapin parkway	Linwood avenue	30	H	22 ft. n. of s. line.
Jelavan avenue		,	Linwood avenue	Main	91	H	24 ft. n. of s. line.
Jelavan avenue			Niagara	West avenue	0 4	40	33 ft. s. of n. line.
Jelavan avenue			Chapin parkway	150 feet westerly	9	4 11	26 ft. n. of s. line.
Jelaware avenue .			Church	Niagara.	00	×	38 ft. e. of w. line.
elaware avenue .			Niagara	Chippewa	10	×	58 ft. e. of w. line.
Jelaware avenue .			Chippewa	Virginia	01	Н	58 ft. e. of w. line.
elaware avenue .			Virginia	North	9	H	41 ft. w. of e. line.
Jelaware avenue			North	h of	13	H	ě,
elaware avenue .			585 feet north of Ferry	775 feet north of Ferry	01	H	14 ft. w. of e. line.
Jelaware avenue .			775 feet north of Ferry	Chapin place	9	Ξ;	
Jelaware place			Delaware avenue	Virginia	4	H	n. of s.
Dewitt			Breckenridge	Bouck avenue	4	*	w. of e.
Dewitt			Bouck avenue	Forest avenue	9	×	. of w.
bewitt			Forest avenue	Bradley	4	×	
Eagle			Main	Pearl	9	=	n. of s.
agle			Franklin	Terrace	00	*	26 ft. s. of n. line.
agle			Main	Pearl	9	2	30 ft. n. of s. line.
agle			Pearl	Franklin	9	H	25 ft. n. of s, line.
ast			Parish	Farmer	91	×	39 ft. e. of w. line.
Last		e	Farmer	Hertel avenue	91	2	39 ft. e. of w. l
dward			Virginia	220 feet e. of Delaware ave.	*	H	4
Efner			Georgia	Carolina	0	×	10 ft. e. of w. li

32 ft. w. of e. line. 33 ft. w. of e. line. 21 ft. w. of e. line.	32 ft. e. of w.	33 ft.	র	3	30 ft. e. of w.	35	31	38 ft.	62 ft. s. of n.		_		-			40 ft. e. of w.	23 ft. w. of e.	19 ft. e. of w.	20 ft. n. of s.	42 ft. s. of n.	32 ft. n. of s.	26 ft. s. of n.	41 ft. s. of n.	40 ft. s. of n.	55 ft. n. of s.	41 ft. e. of w.	26 ft. e. of w.	40 ft. w. of e.	34 ft. w. of e.	20 ft. s. of n.	22 ft. n. of s.	- 42 ft. s. of n. line.
~~X	Ξ=	=	王	Ξ	=	=	Ξ.	~	~	~	=	Ξ	=	=	<u>~</u>	~	=	=	<u>~</u>	≃ :	Ξ,	~ (~	Ξ	Ξ	Ξ	王 —	Ξ_	≃	<u></u>	~	<u> </u>
400	9	•	9	9	9	9	9	9	4	0	9	9	4	9	9	9	9	9	9	9	9	4	9	9	12	9	9	9	9	4	4	9
Maryland	Massachusetts	Bryant	Utica	Highland	Bouck avenue	Delavan	Terrace	Water	Buffalo River	Pearl	Rhode island	125 feet westerly	270 feet southerly	Hampshire	Niagara	Pennsylvania	Porter avenue	Pennsylvania	Gurnsey	Tonawanda	Grant	Niagara	West avenue	Richmond avenue.	Richmond avenue	Vermont.	Rhode Island	Hampshire	Pennsylvania	Maiden Lane	Niagara	West avenue
			•	•	:	•	:		•	•	•	:	•	•	•	:	•		•	•	•	•	•	•	•	•	•	:	:	:	:	:
• • •	•		•	•	:	•	•	•	•		•	•	•	•	•	•	•	:	•	•	:		:	•	•	•	:	:	:	:	:	•
Carolina Maryland	Rhode Island	North	Hodge avenue.	Lexington	Ferry	Clinton	Main	Terrace	Water	Main	Massachusetts .	Pearl	Connecticut	Connecticut	Hampshire	Hudson	Jersey	Jersey	Niagara	Gumsey	Herkimer	Erie Canal	Gelston	West avenue.	Main	York	Vermont	Rhode Island .	Court	State	Erie Canal	Niagara
Efner	Eighteenth	Elmwood avenue	Elmwood avenue	Elmwood avenue	Elmwood avenue	Emily place	Erie	Erie	Erie	Erie	Essex	Express	Fargo avenue	Fargo avenue	Fargo avenue	Fargo avenue	Fargo avenue	Fargo avenue	Farmer	Farmer	Ferguson	Ferry	Ferry	Ferry	Ferry	Fifteenth	Fifteenth	Fifteenth	Fifth	Fly	Forest avenue	Forest avenue

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Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
Forest avenue	West avenue	Lincoln parkway	12	2	40 ft. s. of n. line.
Forest avenue	Richmond avenue	Carmine place	9	н	100
Fourteenth	Wadsworth,	Porter avenue	24	Н	
Fourteenth	Porter avenue	500 feet north of York	9	H	25 ft. e. of w. line.
ourteenth	Connecticut	130 feet southerly	90	н:	
Fourteenth	Connecticut.	Rhode Island	9	I	2
Pourth	Genesee	A20 feet northerly	0 4	12	36 ft. w. of e. line.
Fourth	Carolina	300 feet southerly.	4	×	
Fourth	Virginia	Maryland	9	R	17 ft. w. of e. line.
Fourth	Jersey.	Pennsylvania	9	×	16 ft. e. of w. line.
Franklin	Terrace	Erie	4	H	w.
ranklin	Erie	Niagara	00	H	ol e.
Franklin	Eagle,	Chippewa	4	24	of e.
Franklin	Chippewa	Soo feet northerly	0 .	40	41 ft. e. of w. line.
Franklin	Soo feet north of Chippewn.	Imple	44	42	20 ft. w. of e. line.
Fremont place	Virginia	North	9	:=	30 IL C. Ol W. Bite.
Front avenue	Massachusetts	lersev	91	H	16 ft. e. of w. line.
Front avenue	Porter avenue	Vermont.	20	×	48 ft. w. of e. line.
Front avenue	Rhode Island	216 ft. south of Connecticut .	9	H	30 ft. w. of e. line.
Front avenue	Stand Pipe	Niagara	91	K	42 ft. w. of e. line.
Front avenue	Valve House	Hampshire	24	=	70 ft. w. of e. line.
Gelston	Ferry	Bouck avenue	4	K	36 ft. w. of e. line.
Genesee	Main	Pearl	4	H	31 ft. n. of s. line.
Genesee	Pearl	Franklin	*	K	35 ft, s. of n. line.
Genesee	Niagara	Franklin, s. S. of Shirt	1 9	K	31 ft, n. of s, line.
cenesee	Nagara	East line of C. R. K	10.	2	58 ft. s. of n. line.

36 ft. s. of n. line. 36 ft. n. of n. line. 28 ft. n. of s. line. 22 ft. s. of n. line. 21 ft. e. of w. line. 38 ft. e. of w. line.	22 ft. w. of e. line. 31 ft. e. of w. line. 25 ft. n. of s. line. 8 ft. n. of s. line. 17 ft. e. of w. line. 30 ft. s. of n. line.	first of n. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	35 ft. w. of c. line. 25 ft. w. of c. line. 18 ft. s. of w. line. 16 ft. s. of n. line. 12 ft. n. of s. line. 22 ft. n. of s. line. 33 ft. w. of c. line. 33 ft. w. of c. line.

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nd House			
Niagara Sixth. Court. C. R. R. Round House Austin. Hamushire	Arnold avenue Forest avenue Elam place Raiiroad. Hertel avenue Forawanda	East Plymouth avenu Ferry Albany Prime Herkimer Erie Canal	Douck avenue Bird East Tonawanda . Fond of street Howard Szo feet east. 442 feet west. Ashland avenu Southerly Rhode Island
Chippewa Niagara Sixth Court Military road. Amherst	Ferry Bouck avenue Bouck	Prospect aven: Thirteenth. Front. Main Dewitt Albany	Bouck avenue Clinton avenue Clinton avenue Niagara East Ferry Richmond Howard Ashland Delaware aven Hamilton
Georgia Georgia Georgia Georgia Glor Glor	Grant Grant Grant Grant Grant Grant Greenfield Gull Hamilton	Hampshire Hampshire Hampshire Hampshire Hanover Helen Herkiner	Herkiner. Herkiner. Herkiner. Hertel avenue. Hertel avenue. Highland. Highland. Highland. Highland. Highland. Highland.

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TWENTY-FIRST ANNUAL REPORT OF

30 ft. n. of s. line.
32 ft. n. of s. line.
22 ft. n. of s. line.
23 ft. n. of s. line.
23 ft. w. of e. line.
27 ft. s. of n. line.
37 ft. s. of n. line.
38 ft. w. of s. line.
35 ft. w. of e. line.
35 ft. w. of e. line. Location of Pipe, 23 ft. n. of s. li 18 ft. s. of n. li of e. 1 Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System. 12 ft. n. of Size of Pipe, Inches. Porter avenue . Lake View avenue Delaware avenue. Richmond avenue. Court place . . . West avenue . . . Main Erie Canal. . . . Bouck. . . . Breckenridge . . . Cottage Wadsworth. . . Canal West avenue. . 200 feet easterly To Delavan. . Forest. . . Crescent. Main ake View avenue Front avenue. . Delaware avenue Prospect avenue Delaware avenue Genesee Sixth Franklin. . . . Front avenue. . Prospect avenue ourteenth. . . Seneca . . . From Pearl . . . Cottage . . . Main . . . Porter avenue Allen . . . Crescent. . . Fagle. . . Delavan . . Amberst. . Cetchum place . wett avenue . . Kremlin alley . . ohn.... loward avenue. Street, loward avenue . ohnson place. wett avenue, rving place... Hudson . loyt. . . loyt. . . ersey . . Incon . luron. Incon . Incon . Indson Indson Inron . ersey ersey ersey ersey ersey

40 ft. e. of w. line. 66 ft. e. of w. line. 43 ft. w. of e. line.	e. of ₩.	20 ft. e. of w. line.	29 ft. n. of s. line. 25 ft. n. of s. line.	41 ft. s. of n. line. 30 ft. s. of n. line.	29 ft. n. of s. line. 41 ft. s. of n. line.	22 ft. s. of n. line. 14 ft. s. of n. line.	50 ft. n. of s. line.	41 ft. s. of n. line.	38 ft. s. of n. line.	26 ft. n. of s. line. 26 ft. n. of s. line.	34 ft. n. of s. line. 25 ft. e. of w. line.	45 ft. w. of e. line.	29 ft. w. of e. line.	36 ft. s. of n. line. 24 ft. n. of s. line.	41 ft. w. of e. line.	ن نے	18 ft. w. of e. line.	12 ft. e. of w. line.
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South line of Park Ferry	South end of Bridge.	Russell	100 feet west of Fourth.	Twelfth	Seventh	Niagara	Seventh	Prospect avenue	Fourteenth	Flymouth avenue	Bouck.	Delavan avenue	Hertel avenue	Wilkeson	Mohawk.	Eagle.	Rhode Island	Massachusetts
Pennsylvania Forest avenue	Main South end of Bridge.	Bridgeman	Seventh	West avenue	Niagara	Seventh	Front	Niagara	Plymouth avenue	Fourteenth.	Terrace	Bouck avenue	Austin.	Main	Chippewa	Niagara	250 ft. north of Connecticut.	Connecticut
		• •	• • •		: :			•	• •			:	• •		-	•		•
Lake View avenue Lincoln parkway Linwood avenue	Lloyd	Logan	Maryland	Maryland	Maryland	Massachussetts Massachussetts	Massachussets	Massachusetts	Massachusetts	Massachusetts	Mechanic	Michigan	Military road	Mohawk	Morgan	Morgan.	Niagara	Niagara

TWENTY-FIRST ANNUAL REPORT OF

Street.		From	To.	Size of Pipe, Inches.	Location of Pipe,
Niagara	1	Massachusetts	Front avenue	9	3
Niagara		Front avenue.	Breckenridge	16 B	20 ft. w. of e.
Niagara		Albany	Forest avenue	4	IO ft.
Niagara		Breckenridge	300 feet northerly	4	19 ft. w. of e.
Niagara		Bouck avenue	250 feet southerly	4	19 ft.
Niagara	14	Bouck avenue	Forest avenue	4 P	19 ft.
iagara		Forest avenue	Parish	1 9I	18 ft. w.
Niagara		Amherst	Parish	9	63 ft. e. of w.
Niagara	4	Amherst	City line	9	39 ft. w. of e.
Nineteenth		Rhode Island	Ferry	9 F	36 ft. e. of w.
Norris place		Cottage	Wadsworth	4	IS ft. s. of n.
North		Main	Porter avenue	12 F	31 ft. n. of s.
North Pearl		Virginia	North	9	28 ft. e of w.
Norton		Water	Peacock	9	23 ft. s. of n.
Oakwood		Parkside	Crescent	9	18 ft. n. of s.
Orton place		Hudson	Pennsylvania		18 ft. e. of w.
Parish		Niagara	East	16	40 ft. s. of n.
Park	(.)	Virginia	North		31 ft. e. of w.
Park place		Delaware avenue	Johnson place	4 F	18 ft. n. of s.
Parkside avenue		Jewett avenue	Oakwood	9	-
Peacock	,	Erie	Norton	9	30 ft. s. of n.
Pearl		Commercial	Terrace	4 B	24 ft, w. of e.
Pearl		Terrace	Court	9 H	
Pearl.		Terrace	200 feet northerly	6 R	44
Pearl	,	Court	Genesée	4 A	-
Pearl		Genesee	Tupper	4	Ė
Pearl		Virginia	250 feet southerly	4	H 22 ft. w. of e. line.
The second secon					

Pearl	Niegera	Hiron		24 ft a of we line
Pennsylvania	Negation	175 feet west of Fourth	2	رد ما دو
Pennsylvania	Prospect avenue	I so feet easterly	4 H	
Pennsylvania	West avenue	Plymouth avenue	6 R	8
Pennsylvania	Plymouth avenue	Wadsworth	H - 9	25 ft. n. of s. line.
Pennsylvania	Fifth	250 feet westerly	3 R	ft. n.
Perkins Place	Herkimer	DeWitt		ft. n. of s.
Plymouth avenue	Hudson	Jersey	H 9	e. of w.
Plymouth avenue	Porter avenue	Connecticut	H - 91	یے
Plymouth avenue	Connecticut	Rhode Island	H 9	
Plymouth avenue	Rhode Island	Massachusetts	H 9	25 ft. e. of w. line.
Plymouth avenue	Massachusetts	Hampshire	II 9	43 ft. w. of e. line.
Plymouth avenue	Hampshire	School	Н 9	25 ft. w. of e. line.
Pooley place	DeWitt	Grant	4 - R	ró ft. n. of s. line.
Porter avenue	Sixth	200 feet west of Fourth	4 R	21 ft. n. of s. line.
Porter avenue	Sixth	Seventh	9 R	22 ft. n. of s. line.
Porter avenue	Seventh	Prospect avenue	4 H	ft. n. of s.
Porter avenue	Prospect avenue	West avenue	20 H	s.
Porter avenue	West avenue	Fourteenth	= t	8 ft. n. of s. line.
Porter avenue	Prospect avenue	West avenue	24 K	8 ft. s. of n. line.
Porter avenue	Fourteenth	•	12 II	ķ
Porter avenue	Jersey	Fourteenth	12 H	s,
Prime	Main	Hanover		20 ft. e. of w. line.
Prospect avenue	Massachussetts		36 K	18 ft. w. of e. line.
Prospect avenue	Huron	Hudson	6 R	38 ft. e. of w. line.
Prospect avenue	Iludson	Porter avenue	H 9	25 ft. w. of e. line.
Prospect avenue	Porter avenue		24 R	12 ft, w. of e. line.
Prospect avenue	Porter avenue	nt	 	12 ft. e. of w. line.
Prospect avenue	Connecticut	Vermont	4 H	of e.
Prospect avenue	Vermont.	Hampshire	H · 9	of e.
Prospect avenue	Hampshire	Niagara	6 R	42 ft. w. of e. line.
Penfield	West avenue	Niagara	6 R	25 ft. s. of n. line.
Public alley	Jersey	Fourteenth	4 H	13 ft. s. of n. line.
Rhode Island	Sixth	Niagara	H 9	of n.
Rhode Island	Prospect avenue	Richmond avenue	Н _ 9	of s.
Richmond avenue	Jersey	Forest avenue	H - 91	1 16 ft. e. of w. line.

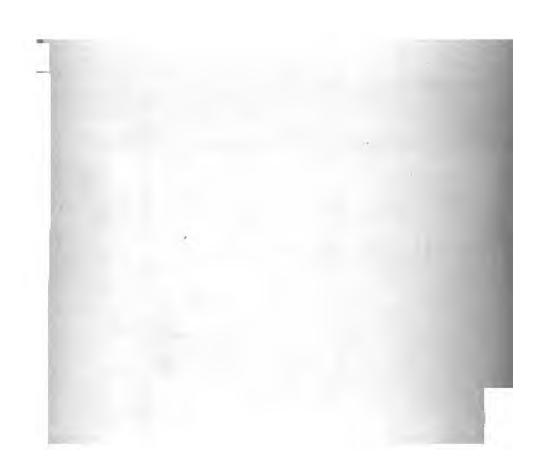
Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,	From	То	Size of Pipe, Inches.	Location of Pipe.
Richmond avenue, east side	Ferry	Butler	4 H	to ft. w. of e. line.
Richmond avenue, east side		Anderson place	H 9	16 ft. w. of e. line.
River		Peacock slip	6 R	41 ft. e. of w. line
Seneca	Main	Franklin	4 H	30 ft. s. of n. line.
Seneca	Main.	Terrace	I2 R	27 ft. n. of s. line.
Seneca	Main	100 feet westerly	6 R	50 ft. n. of s. line.
School	Fargo avenue	Prospect avenue	6 R	40 ft. n. of s. line.
School	Fargo avenue	Plymouth avenue	H 9	40 ft. n. of s. line
Seventeenth	Vermont	Connecticut	H 9	22 ft. e. of w. line
Seventeenth	. Richmond avenue	Connecticut	H 9	24 ft. e. of w. line.
Seventh	. Court	Massachusetts	36 R	24 ft. w. of e. line.
Seventh	. Wilkeson	Georgia	4 R	33 ft. e. of w. line.
Seventh	. Georgia	Porter avenue	6 R	40 ft. w. of e. line,
eventh	. Porter avenue	Vermont		26 ft. e. of w. line.
Seventh	. Vermont	Rhode Island		12 ft. e. of w. line.
Seventh	. Vermont	Massachusetts		24 ft. e. of w. line.
Seventh	. Rhode Island	Massachusetts		33 ft. w. of e. line.
Seventh	. Massachusetts	Front avenue		24 ft. e. of w. line.
Seventh	. Store-house	Court	1% R	21 ft. e. of w. line.
Sherwood	. Hampshire	Arkansas		20 ft. e. of w. line.
Shields avenue	. Massachusetts	Utica	H 9	23 ft. e. of w. line.
Sixteenth	. York	Vermont	H 9	40 ft. w. of e. line
Sixteenth	. Massachusetts	Hampshire	H 9	20 ft. e. of w. line.
on the same	Court	f Carolina	6 R	24 ft. w. of e. line.
Tour avenue	. Court	Porter avenue	20 R	48 ft. w. of e. line.
ate	. Canal	Water	N A	e. of
St. John's place	. Wadsworth	225 feet westerly	H	
Tohn's place	Orton place	125 feet easterly	E	and a not a line

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Massachusetts 6 H 19 ft. s. West avenue 6 H 27 ft. n. Niagara 24 R 41 ft. n. Front avenue 3 H 52 ft. s. Front avenue 3 F 40 ft. s. Seventh 39 ft. s. Franklin 10 H 25 ft. n. Mest avenue 20 R 39 ft. s. Figh 6 R 39 ft. n. Seventh 6 G R 39 ft. n. Pennsylvania 6 R 39 ft. n. Pennsylvania 6 R 25 ft. n. Porter avenue 6 R 25 ft. n. Porter avenue 6 R 25 ft. n. Viginia 6 R 25 ft. n. Porter avenue 7 6 R 25 ft. n. Porter avenue 7 6 R 25 ft. n. Vermont 8 6 R 25 ft. n.	
Nest avenue	Shields avenue.
Nagara 10	Richmond avenue
Seventh 24	West avenue .
Front avenue 20	Prospect avenue
Seventh 3	Seventh
Seventh	Seventh
Seventh 4 H 40 ft. s. of n. line. Franklin 10 H 25 ft. n. of s. line. Franklin 20 R 55 ft. n. of s. line. West avenue 20 R 56 ft. n. of s. line. Prospect avenue 6 R 39 ft. n. of s. line. Seventh 6 R 39 ft. n. of s. line. Seventh 6 R 25 ft. n. of s. line. Front avenue 6 R 25 ft. n. of s. line. Pemsylvania 24 H 16 ft. n. of s. line. Norion 8 25 ft. n. of s. line. 16 ft. n. of s. line. Norion 6 R 25 ft. n. of s. line. Virginia 6 R 20 ft. w. of e. line. Vermont 6 R 38 ft. w. of e. line. Vermont 16 H 25 ft. e. of w. line. Vermont 6 R 25 ft. e. of w. line.	Niagara
Franklin 10	Niagara
Main 10 H 25 ft. n. of s. line. Prospect avenue 20 R 56 ft. n. of s. line. Prospect avenue 6 R 39 ft. n. of s. line. Skrh 6 R 39 ft. n. of s. line. Front avenue 6 R 20 ft. s. of n. line. Pennsylvania 24 H 16 ft. n. of s. line. Norion 9 H 16 ft. n. of s. line. Noriginia 6 R 20 ft. w. of e. line. Porter avenue 6 R 20 ft. w. of e. line. Connecticut 6 R 39 ft. w. of e. line. Vermont 6 R 20 ft. w. of e. line. Vermont 6 R 22 ft. e. of w. line. Breckenridge 6 R 22 ft. e. of w. line.	Cottage
West avenue 20	Franklin
Prospect avenue 6	Tupper
Seventh	West avenue.
Fifth	Prospect avenue
Front avenue 6 R 25 ft. n. of s. line. Pennsylvania 24 H 16 ft. n. of s. line. Wadsworth park 6 H 9 ft. n. of s. line. Norton 6 H 14 ft. e. of w. line. Breckenridge 6 H 31 ft. w. of e. line. Confect avenue 20 R 39 ft. e. of w. line. Connecticut 4 4 51 ft. w. of e. line. Vermont 16 H 26 ft. e. of w. line. Breckenridge 6 R 22 ft. e. of w. line. Breckenridge 6 R 22 ft. e. of w. line.	Seventh
ark. 24 H 16h. n. of s. line. 6 H 9h. n. of s. line. 6 H 14f. e. of w. line. 6 H 31 fl. w. of e. line. 7 C R 39 fl. e. of w. line. 8 H 51 fl. w. of e. line. 16 H 26 fl. e. of w. line. 16 H 26 fl. e. of w. line. 6 R 22 fl. e. of w. line.	Fifth
ark	Allen
E	College
Breckenridge 0 H 31 H, w. of e. Virginia 20 R 20 ft. w. of e. Forter avenue 20 R 39 ft. e. of w. of e. Connecticut 16 H 38 ft. w. of e. Vermont 16 H 25 ft. e. of w. of e. o	Commercial .
e. 7 20 ft. w. of e. 1 20 ft. w. of e. 1 20 ft. w. of e. 1 38 ft. w. of e. 1 38 ft. w. of e. 1 38 ft. w. of e. 1 6 ft. e. of w. 1 6 ft. e. of	Ferry
rerly 20 K 39 ft.c. of w. 16 H 51 ft.w. of c. 16 H 26 ft.w. of c. 16 H 26 ft.c. of w. 16 K 22 ft.c. of w. 1	Caroline
16 H 38 ft. w. of e. 38 ft. w. of w. l. of w.	Virginia
6 H 38ft.w.ofe. 16 H 26ft.e.ofw.l	Porter avenue
6 R 22ft.e.ofw.l	Porter avenue
6 R 22 ft. c. of w. 1	Connecticut .
	Albany

27 ft. e. of w. line. 28 ft. e. of w. line. 27 ft. n. of s. line.	24 ft. w. of e. line.	25 ft. s. of n. line.	40 ft. n. of s. line.	27 ft. s. of n. line.	25 ft. e. of w. line.	43 ft. s. of n. line.
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Hampshire	Carolina	Sixth	Seventh	Mohawl	Hampshire	Richmo
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ermont	eorgia	ourt	ixth	eventh	fassachusetts	Vest avenue
Vermont	Georgia	Court	Sixth	Seventh		West avenue
. Vermont	Georgia	Court	Sixth	Seventh		
Vermont	Georgia	Court	Sixth	Seventh		
Vermont Hampshire Richmond avenue	Georgia Carolina	Court	Sixth	Seventh		
Vermont Vermont Itampshi Richmon	Georgia	Court	Sixth	Seventh		
Vermont		Court	Sixth	Seventh		
Vermont			Sixth	Seventh		
Vermont		Court	Sixth	Seventh		
renue Vermont renue Richmon ummer Richmon		on Court	on Sixth	on Seventh		
Vermont	Whitney place Georgia	Wilkeson Court	keson Sixth			York West avenue



TWENTY-SECOND

ANNUAL REPORT

Buffalo City Water Works



1890.

& BURFALO PUB. LIB'Y



TWENTY-SECOND

ANNUAL REPORT

Compliments of

Buffalo Water Commissioners.

PLEASE EXCHANGE.

BUFFALO, NEW YORK,

FOR

THE YEAR 1890.



BUFFALO:

Haas & Klein, Pra., Seneca St. cor. Terrace.

1891.

OFFICERS-1890.

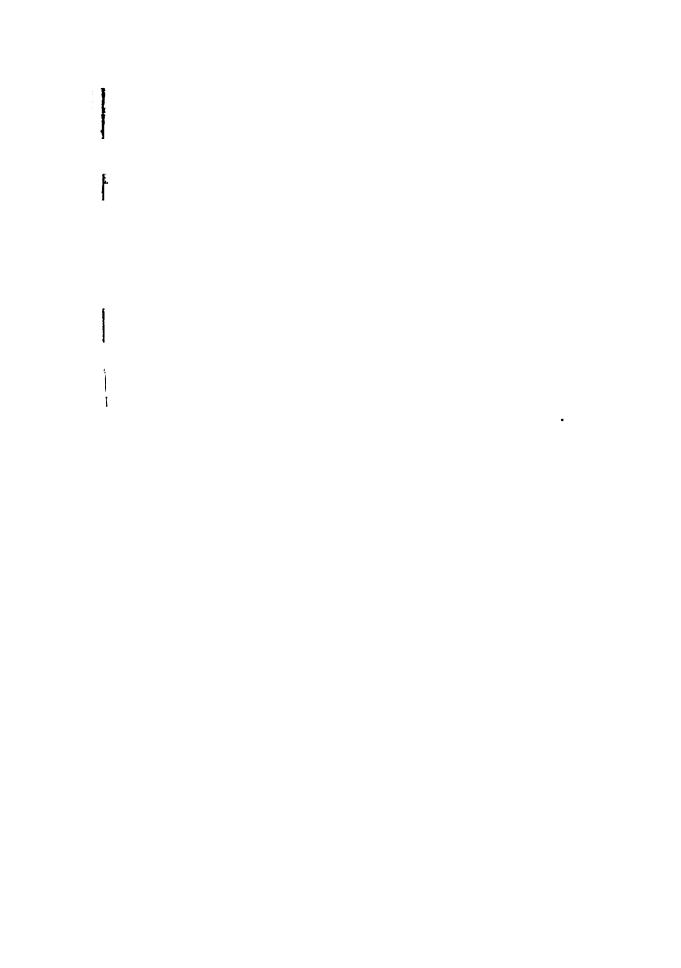
Board of Water Commissioners.

LOUIS P. REICHERT, Chairman,
JAMES RYAN, Secretary.
S. K. WORTHINGTON.

Superintendent and Engineer, LOUIS H. KNAPP.

Registrar,
JOHN T. REES.

Chief Engineer of Steam Power, PATRICK BRENNAN.



COMMISSIONERS' REPORT.

To the Honorable the Common Council of the City of Buffalo:

In compliance with title fifteen, section number ten of the City Charter, we have the honor to herewith submit to you the twenty-second annual report of the Buffalo City Water Works.

The works in all its departments are in good order. The general favorable record for the year being in excess of all previous years. The running expenses for the year was \$143,-091.79. This is \$2,731.19 less than for previous year. This is a good showing as we had some twenty-seven miles more of pipe to care for.

The total receipts for water, etc., was \$595,456.94. This is an increase over previous year of \$52,504.59.

The total requirements of the Water Department for 1890 were:

Interest paid on bonds	\$175,054.24
Maintenance and repairs	143,091.79
Extensions and improvements	264,859.04

\$583,005.07

There was also expended \$20,250.00, being final payment on Engine No. 6, completed during the year. The money for this purpose being provided for in previous year.

The revenue of the department met all the expenses of the department including \$109,096.73 expended in laying some two and one-quarter miles of 36-inch pipe, to make connection with new reservoir, and we still have a surplus of \$12,451.87 over all disbursements.

To provide water facilities in streets to be paved, and others being rapidly built upon requires annually the expenditure of large sums of money for pipe laying. We feel assured that the revenue in the future from rates will amply provide funds for this purpose and still have sufficient to complete the new reservoir, without resource to bonding the city. We have arranged to transfer to reservoir construction account \$100,000,000,000 from our revenue to meet the outlay for next year upon this improvement.

There has been expended upon the water works plant from time of purchase to date \$11,798,787.62.

This large outlay has been provided for by	
Receipts from water rates	\$6,469,781.32
Issue of bonds	3,685,882.00
Premiums on bonds	93,059.75
Provided from general fund for pipe laying, etc	1,693,612.62
•	11,942,335.59
Less cash on hand	143,547.97
	\$11,798,787.62

DODGE FARM RESERVOIR.

The work upon the improvement began during the year 1889, under the contract of Messrs. O'Brian & Clark. The amount of work completed during the year 1890 was \$36,844-

92, the amount paid contractor was \$31,388.48, leaving unpaid \$5,456.44; this amount is retained in conformity with the contract until completion of entire contract.

The following statement shows standing of new reservoir account from beginning to January 1st, 1890, viz.:

Amount of contract	\$334,502.30
Total amount of work done and material furnished	132,221.73
Fifteen per cent. of above retained until completion	19,833.26
Total amount paid contractors on contract	113,388.48

PIPE LAYING.

There was laid twenty-six miles, 3,190 feet, of water mains of various sizes, as follows:

3	inch	1,231	feet	at a	cost	of	\$	740.11
4	"	3,900	"		"			3,256.72
6	"	98,256	"		"			85,134.02
8	"	93	"		"			171.81
10	"	5,093	"		"			8,209.20
I 2	"	14,589	"		"			27,697.65
16	"	2,666	"		"			6,250.11
20	"	1,792	ii		"			6,731.68
24	"	780	"					3,901.58
36	"	12,070	"		"		:	109,136.60
		140,470					\$:	251,229.48

The total mileage pipe in this city is 302 miles and 2,431 feet.

The small mains in following named streets were taken up and replaced by larger ones.

Pearl street, 6 inch, replaced by 12 inch, between Chippewa and Tupper streets.

Chippewa street, 6 inch, replaced by to inch, between Delaware avenue and Ellicott street.

Babcock street, 6 inch, replaced by 12 inch, between Clinton and William streets.

Oak street, 6 inch, replaced by 12 inch, between Broadway and Genesee street.

There were 4,162 new taps inserted in the mains during the year, the total number in the city, January I, 1891, was 40,331.

We estimate that the Niagara water is furnished to not less than 200,000 of our population.

The total pumpage for the year was 17,340,104,076 gallons, a daily average of 47,517,137 gallons. This is 186 gallons daily per capita based upon a population of 254,457.

This high per capita is partly accounted for by the large manufacturing industries located here, some of them using extraordinary large quantities of water, but still it is much too high. The use of water, however lavish, should not be considered wasting it, but allowing water to run even in small quantities through leaky fixtures is wanton waste. An ordinary closet if allowed to run will waste in twenty-four hours 7,000 gallons. While the works are owned by our citizens collectively and the supply unlimited, still each consumer should for their own interest, seek to avoid unnecessary waste.

Improved fire hydrants of large capacity have been set upon line of new mains. The number placed thereon was 151. Making a total of 2,589 in the city.

The new mains as laid yearly, are provided with gates or valves for regulating the water, in case of breaks in the pipes. They are so set, that in case of accident to our pipe system, the repairs can be made without inconvenience to a large section of territory or any great number of consumers. There was set during the year 325 valves of various sizes.

WATER DEBT.

There has been no change during the year in the amount of bonds outstanding, same being on January 1st, 1891, \$3,435,-882.00; although the interest account has been reduced by refunding \$150,000.00 of 7 per cent. bonds at lower rate 3½ per cent. There will fall due during 1891, \$250,000.00 of bonds bearing 7 per cent. interest. We would recommend that they be refunded at a lower rate.

NEW ENGINE.

There was completed and accepted during the year a new twenty million gallon Gaskell Compound Pumping Engine. The trial tests show that it exceeds the guarantees under contract.

On duty—Twenty-five per cent.

On capacity—Five per cent.

This pump is in every respect a good one and gives entire satisfaction.

The Bird Island openings in the new and old tunnel is a source of great importance in case of accident, or the closing with ice of the openings to the Inlet Pier in the river, although it is not the intention to use them, unless absolutely necessary. The openings are badly protected, and all work done upon them yearly, to protect them, is carried away by high water and ice flows. It will become necessary in our opinion, to protect these openings by a permanent structure of stone.

For particulars in detail respecting the entire department we refer you to the report and tables furnished this board by the superintendent, registrar, and chief engineer of steam power, all of which is

Respectfully submitted,

L. P. REICHERT,

JAMES RYAN,

S. K. WORTHINGTON,

Water Commissioners.

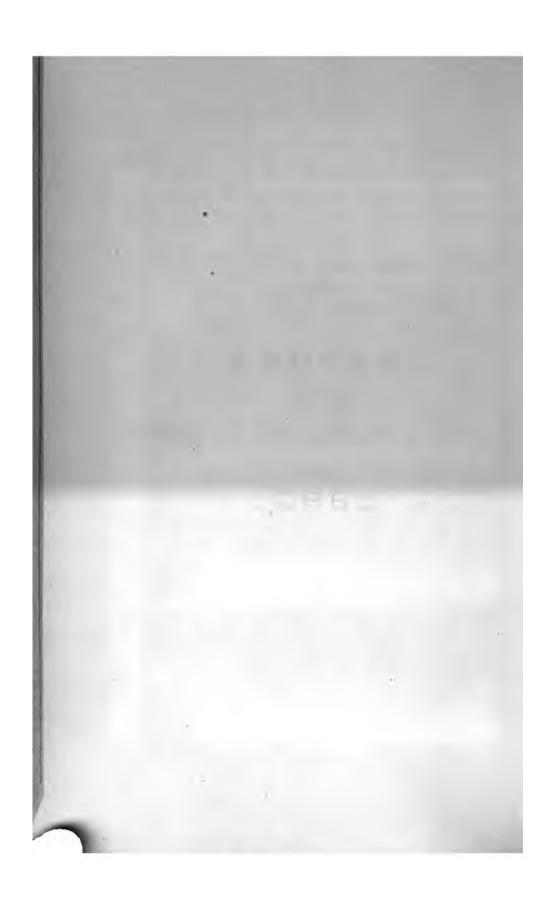
REPORT

OF THE

Superintendent and Engineer

FOR

1890.



BUFFALO CITY WATER WORKS.

Superintendent and Engineer's Office.

Buffalo, January 1, 1891.

To Louis P. Reichert, James Ryan, and S. K. Worthington, Water Commissioners:

GENTLEMEN—I have the honor, herewith, to present the annual report showing the operation of the department during the year ending December 31st, 1890.

The new 20,000,000 gallon engine was tested October 29th. The capacity was found to be 21,129,065.16 gallons. The duty was 131,120,226.9 foot pounds or 24.87 per cent. in excess of the contract. A detail report of the test has been submitted.

The cost was \$88,250.00. The total daily pumpage capacity of the works is now 95,000,000 gallons.

The total amount expended during the year on the new reservoir has been as follows:

Paid Contractors on contract	\$31,388.48
Paid for cast-iron pipe and specials	1,552.96
Paid for engineering and stationery	1,958.25
Paid for all other expenses	55.00

Total.....\$34,954.69

Under date of December 8th a full report of the work was made.

There was laid twenty-six miles and 3,190 feet of cast iron pipe at a cost of \$251,229.48. The total amount of pipe in the city being 302 miles and 2,431 feet. There were inserted in the pipes 4,162 services, the total number now being 40,331.

There were 151 new hydrants used, making the total number of fire hydrants in the city 2,589. The number of valves used being 325.

We have in use ninety-four metres and 29 hydraulic elevators.

The amount of water registered by the meters was 2,236,692,300 gallons and the amount collected at 3c. per thousand gallons was \$67,107.69. The amount of water used by the hydraulic elevators was 690,516.666 gallons, the amount collected at 6c. per thousand gallons was \$4,143.10. The expense of maintaining the meters was \$368.82. There was collected from the unmetered water, amounting to 14,412,895,110 gallons, the sum of \$498,242.06 or about 3½c. per thousand gallons.

The total amount of water pumped was 17,340,104,076 gallons, being a daily average of 47,507,137 gallons or 186 gallons per day per capita.

The greatest amount of water pumped in one day was 63,437,780 and the least was 35,209,200 gallons.

The expense of maintaining the department was \$143,091,79, being \$2,731.19 less than the previous year.

The total revenue received was \$595,456.94 of which \$569,492.85 was obtained by the sale of water and \$25,964.09 from other sources. The cost of pumping the water per thousand gallons, including all expenses was 82-100 of a cent and in-

cluding the interest which was \$175,054.24, the cost was I and 83-100 of a cent.

An effort was made to procure a supply of natural gas for fuel at the works during the summer. A well was drilled 2,020 feet in depth. At the depth of 900 feet a small supply of gas was obtained but not enough to use. The well has been cased for the first 700 feet and is perfectly dry and in condition to go deeper if ever thought advisable. The total cost of the well was \$3,239.64.

RECOMMENDATIONS.

During the coming year the department will occupy their new quarters in the Municipal building, embracing the entire first floor. The increased accomodation will greatly facilitate the business of the office and add greatly to the convenience of the consumers. In this connection I would suggest the advisability of abandoning our present store house and yard and delivering the same to the Fire Department, and the Water Department secure the Terrace Park directly in the rear of our new offices for storage purposes. This park has more than double the space that we now have and will afford ample accomodation for all the uses of the department. Our present store house quarters are not convenient and the buildings are old and are not adapted for the purposes for which they are used. If this park is obtained for our use a track can be laid leading to it and our supplies unloaded direct from the cars, a plan of this park has been made, showing the proposed improvements.

When the new reservoir is completed the Niagara street one can be abandoned and the land sold. A survey of this reservoir has been made and there will be a surplus of nearly 40,000 yards when the embankments are levelled off. This surplus material can be advantageously disposed of in filling up the low land recently acquired for park purposes at the foot of Porter avenue and west of the railway crossing.

With the increased pumpage more trouble is encountered every year from the flow of ice into the pump wells. Every precaution has been taken to remove the ice from the shaft and wells, but this trouble should be removed by preventing the entrance of ice at the inlets. The openings at the Bird Island pier, which are of timber, should be replaced by a permanent structure of stone. The protection of these openings are of the utmost importance, for should they become closed at any time the entire water supply would be cut off.

The house previously occupied by the Chief Engineer of Steam Power, that was abandoned when the last 36-inch pipe was laid, should be replaced by a new one on the lot owned by the city adjoining the works. The Engineer should be within easy call of the watch engineers in cases of emergency.

Engine No. 2 at the lower pumping station requires a new foundation, the refitting of the working parts and new rods.

The two steel boilers purchased in 1872, and the three boilers that were procured in 1875 during the construction of the tunnel, are worn out and require to be replaced by six cylinder boilers similar to the last ones put in at the lower station.

The gate controlling the water in the north conduit should be put in place as soon as circumstances will permit.

A new covering is required on the roof of the north boiler house.

There was consumed in coal, and its equivalent in natural gas, 16,494 tons of coal. The amount paid for housing the coal was nearly \$5,000. By the introduction of coal-handling

machinery this expense can be greatly reduced and is worthy of your serious consideration. The time of handling this large amount of coal by hand has gone by and cheaper appliances are required

The lower engine house should be better ventilated by removing the heated air in the upper portion of the room and by making the present sky light movable

Additional hydrants are required for a better fire protection at the street intersections and in the center of the blocks on Main and Washington streets, between Exchange and Chippewa streets.

The fire reservoir at the corner of Main and Swan streets should be replaced as recommended in the report of 1885.

The repair gang as it now exists should be re-organized. It is the same now as it has been for the past twenty years. This I consider an important matter, as the magnitude of the service requires a more effective organization. My recommendation concerning the matter was given you under date of November 18.

The enormous waste of water still continues as in former years. The introduction and general application of meters seems to be the only satisfactory remedy. A meter rate for domestic consumers should be made with a minimum annual rate. At present the metered rate only applies to manufacturers and elevators.

During the year the last of the free hydrants were abandoned and now no persons are supplied with free water.

Additional horse troughs are needed in the easterly and southerly parts of the city.

In the Jubilee Tract the streets are about all supplied with Niagara water and the wells are being gradually dispensed

with. It, can only be a short time before the supply will be abandoned.

LOUIS H. KNAPP,

Superintendent and Engineer.

REPORT

OF THE

REGISTRAR

FOR

1890.

	,	

REGISTRAR'S OFFICE.

BUFFALO, January 1st, 1891.

To Louis P. Reichert, James Ryan and S. K. Worthington, Water Commissioners:

GENTLEMEN—In compliance with the requirements of your Honorable Body, I have the honor to submit the Registrar's report of the financial transactions of the Department for the past year together with such other matters as may be of interest to you.

The following statement gives receipts and disbursements for the year:

RECEIPTS.

Cash on hand January 1, 1890	•
	\$722,681.78
DISBURSEMENTS.	
Interest on Water Bonds	\$175,054.24
Maintenance and Repairs	143,091.79
Improvements and Extensions	285,109.04
Cash on hand January 1, 1891	119,426.71
	\$722,681.78

Note-The above statement does not include the expenditure on Dodge Farm Reservoir.

DODGE FARM RESERVOIR.

RECEIPTS.

Cash on hand Janury 1, 1890	\$59,075.95
1	7.5
DISBURSEMENTS.	13
Paid during the year to Contractors, etc	
Cash remaining on hand January 1, 1891	24,121.26
	\$59,075.95
The total receipts for water, etc., for the year was	\$595,456.94
This is an increase over the previous year of	CONTRACTOR OF THE PARTY OF THE
The following itemized statement shows source	of revenue,
viz :	2774
Water for City purposes	\$100,000.00
From Domestic Consumers and Mfrs. not metered	391,947.69
" Manufacturers and Railroads, metered	71,250.79
" Builders	2,459.55
" Corporation Cocks	8,657.50
" Street Sprinkling	2,228.50
" Turn-on Fees	279.00
" Circus	15.00
" Street Paving	467.47
" New Boxes	102,00
" Plumbers' Licenses	930.00
" Tapping Fines	6.00
" Flushing Sewers	123.85
	\$578,467.35

FROM SALE OF OLD MATERIAL. Feb. 2, M. McMeely...3 horses, No. 2 Jennie \$60, No. 10 Prince \$90, No. 8 Mollie \$30.....\$180.00 March 15, Star Oil Co....13 empty oil barrels at 75c..... 9.75 19, James Ryan 1 snow shovel 50 20, J. Fenster.....7,640 lbs. old grate bars at \$5.00 per ton 19.10 22, The Kellogg Iron Co4680 lbs.old material at 25c. \$58.50; 1,980lbs.old material at \$40.00.\$39.60 98.10 22, C. H. Kellogg..2 old brackets, 591 lbs. at \$40.00 11.82 31, F. Fenster 292 lbs. old brass at 9c., \$26.28; 800 lbs. old iron at \$10.00 per ton, \$4.00.... 30.28 3, James Collins...old meter box.... April 75 21, Star Oil Co....14 empty oil bbls. 10.50 May 2, Buffalo Cast Iron Pipe Co.....broken pipe, No. 9, 36-in. 4,542 lbs.; No. 10, 36-in. 4,520 lbs., 9,062 lbs. at **\$**30.50..... 138.19 June 11, Buffalo C.I.P. Co.20 ft. pipe 55 lbs. 1,830 at \$30.50 per ton.....

27.91

		/		
May	17,	J. J. Collins	.5 gallons boiled oil\$	2.25
May	21,	Geo. Schneider.	.old hose	-75
July	20,	Star Oil Co	.18 empty oil bar-	
6.16				13.50
**	8,	M. Lichtenstein.		65.50
46			r old force pump,	
			\$15.00; 1 old air	
			compressor,\$40.00;	
			13,126 lbs. cast iron	0.14.9
			at \$12.00, \$78.76;	
	200	11 11000	4,218 lbs. old grate	
			bars at \$5.00, \$10	
			55; 2,428 lbs. old	
			grate bars at \$5.00,	
		- 77	\$6.07; 1528 lbs.	
			wrought scrap bars	
			\$14.00, \$10.69 1	61.07
44	9	M Lichtenstein	.5,790 lbs. cast	01.07
	٠,	M. Lientenstein.		24.74
66	Q	M. Lichtenstein.		34.74
	٥,	M. Lichtenstein.		
"		Buffalo Cast Iro	• • • • • • • • • • • • • • • • • • • •	44.33
	31,		.39,030 lbs. scrap	
		Tipe Co		
			iron at \$12.00; 523	0.
Sant		Star Oil Co	lbs. specials, \$48.50 2	
oept.			.4 empty oil barrels	3.00
••	29,	M. Lichtenstein.	.1,150 lbs. wrought	
			scrap at \$12.00,	
			\$6.90; 4,840 lbs.	
			lead skimmings at	
			\$30.00, \$72.60; 18,-	
			360 lbs. cast scraps	
			at \$12.09, 110.16,. 1	89.66

```
2. A. M. Granger ... 18 lbs. lead ..... $
29, Andrew Gigy ...manure May 1 to
                     to Nov. 1, '90.....
                                          6.00
8, L. H. Knapp....2 gallons oil .....
                                          1.26
26, Star Oil Co....16 empty oil bbls.
29, M. Lichtenstein. . 6,430 lbs.scrap iron
                     at $12.00, $38.58;
                     2,200
                            lbs. scrap
                    iron
                            at . $12.00,
                     $13.20; 450 lbs.
                     wrought
                                scraps,
                     $16.20, $3.65; 2,-
                     350 lbs. lead skim-
                     mings at $30.00,
                     $35.25; 321 lbs. old
                    brass at 9c., $28.89;
                     4,500
                            lbs. cast
                     scraps at $12.00,
                     $27.00 ..... 146.57
30, Buffalo Cast Iron
     Pipe Co.....5,098 lbs. pipe re-
                     turned.......
                                         77.74
30, Buffalo Cast Iron
      Pipe Co.....6,400
                            lbs.
                                   cast
                     scraps, 3,180 lbs.
                    cast scraps, 9,580
                     lbs. at $12.00....
                                         57.48
                                                 $1,590.51
                LABOR AND SUPPLIES.
```

Jan. 7, George Martin..repairing pipe in front of 46 Kane st.\$ 1.60

" 15, J. O. Smith.....labor and material 7.42

28		TWENTY-S	SECOND ANNUAL REPO	RT OF
Jan.	15,	J. O. Smith	labor and materials	\$ 12.89
**	21,	Mrs. Riley	turning on water	
			63 Franklin street,	3.00
**	31,	J. H. Ernew		
			putting in fire sup-	
			ply 227 Mortimer	
			street	22.36
Feb.	1.	A. M. Grange	er 5-ft. hydrants	
-	- 21		\$31.00	62.00
**	6	United States		
	٠,		Co.putting in 3 ft. sup-	
		come bigur	ply	24.72
ec.	10	D C Reard	putting in 4 in. sup-	-4.7-
	10,		ply Washington st.	r 2 6 7
**			Co.laying pipe in	
	+2+	N. 1. C. K. K.	Georgia street	
**	++	N.Y. C. & St.L.		350.75
	17,		changing hydrant	
		K. K. Co		
"	. 0	John Donnieu	Elk street crossing	5.00
•	10,	John Dornty.	repairing pipe	
			Breckenridge and	- (
1	. 1	C I	DeWitt streets	16.73
marc "		_	labor and supplies	101.07
••	17,	George L. I noi	rne, laying pipe in Oak-	
	•	a : .	wood place	207.26
"	18,	Corrinne Lyceu	m.putting in fire sup-	_
			ply	56.39
"	20,	John D. Smith	putting in addition-	
			al supply City Hall	9.78
"	21,	George W. Tiff		
		Sons	raising 4 in. supply	
			for sewer, Wash-	
			ington street	5.00

drant and putting same in......

35.98

		TWENTY-SECOND	ANNUAL REPORT OF
		lo Cast Iron	
W.	In	e Cotrar	sferring pipe
	9	on s Klaus & Bork puts	ing in fire sup-
n	9,	Jewett Estate layi	ng pipe in Sum- avenue 466.47
**	9,	Jewett Estate.	ipe in
-			nue 412.13
"	10,	Erie R. R. S k Yards	connec-
**	18,	Danforth & Clar	-in. sup-
Sept.	2,		ting in supply eorner Main Huron streets 23.23
64	3,	Weyand's Brewery, put	
"	5,	Park Commission- ershyd ting	rant and put- in, Amherst st.
"	5,	James Bolandlabo	• •
"	10.	Louis H. Knapplabo	J
"		Snow Pump Works put	. •
"	11,	G. Langlayi	
			wery 204.19
"	II,	W. T. Coatsworth, lab	or and supplies 65.46

Sept.	11,	St. Michael's		
		Churchla	abor and material\$	54.12
"	11,	James Adamsn	naking connection	
		C	Cleveland avenue.	51.85
"	15,	James Adamsr	epairs to leakCoal	
		a	nd Iron Exchange	2.00
"	16,	D. W. Allen (Jubi-		
		leeWaterWorks) l	abor and material,	8.84
"	17,	James M. Granger,l	aying pipe on Bird	
		a	venue	52,02
"	18,	Erie County Alms		
		Housela	abor and material	
			changing hydrant.	4.95
"	22,	Erie R. R. Co1	abor and material	
		•	William and Bab-	
				40.55
Oct.		Arctic Ice Col	aying pipe 9	94.62
"	I,	Lehigh Valley R.		
		•	outting in 4 in.	
				24.77
46	Ι,	B. C. Rumsey	•	
			-	41.76
"		Buffalo Forge Co.l	abor and supplies,	32.52
46	14,	Coatsworth & Ed-		
		•	in. supply, Tem-	
		-		31.71
"		L. H. Knapp		12.75
"	18,	Buffalo Cement Co.		
			ter avenue, \$442	
			3; laying pipe in	
			Morris st., \$1,081,-	
			i; laying pipe in	
]	Depew ave., \$1,-	

		50000000			
âm		-	893,01; la		
			in Beard	Marie Contraction	
			139.49; la		
-			in Wood a	ve., \$85	
200			46	Marie Control of the	,641.40
Nov.	5,	Jewett Estate			
			in Rodne	ey street	
1		and the last	U	tract	520.52
44	7,	D. O'Day		supplies	
				nd Hur-	
800					22.75
**		L. H. Knapp.		******	2.25
	12,	L. P. Reichert.		material	т3.26
4.	14,	J. D. Murray			62.85
**	25,	Erie R. R. Co	State &		8,20
Dec.	5,	Y. M. C. A			6.60
, 44	10,	John C. Jewett			61.83
**	16,	M. J. Bernhardt			35-37
**	17,	Franklin & Olson			8.23
44	17,	John L. Brothers	.connectio	ns at Ma-	
			sonic Hall		43.89
46	ı8,	W. H. Gibbs	putting in	4 in. sup-	
	•		ply at C	_	
			the Ascen		67.34
"	10	Barber Asphalt Co	renairing	hydrant	
	- 7,	Durber Hopman.oc	on Amher	•	17.55
"	-6	Inmett Estate		•	-1.55
	20,	Jewett Estate		•	0 i-
	_	_	Phelps str		390.49
"	26,	Jewett Estate			
			bert stree	t	273.04
"	27,	Fields Engine and			
		Power Co	.labor and	supplies,	10.04

Dec.	29, J. D. Murray moving valves on
	street\$223.29
66	30, Charles Berrickrepairing pipe on
	Clinton street 9.67
61	31, Wilson Brosrepairing pipe on
	Ferry street 9.97
46	31, Gies & Coputting in 4 in. con-
	nection
46	31, Laverack & Wil-
	liamslaying water mains
	in Koons ave 629.63
"	31, Laverack & Wil-
	liamslaying water mains
	Goodyear ave 699.08
**	31, Laverack & Wil-
	liamslaying water mains
	in Bissel avenue, as
	per contract 682.83
"	31, Empire StateWag-
	on Coconnection 28.80— 15,399.08
	· Total \$595,456.94

The following balance sheet taken from the Ledger shows the exact standing of the various accounts kept for your information at the close of the year. It shows fully the expense incurred in each and every branch of the department. All items of purchase, wages paid, etc., being carefully divided and posted to an account under its proper classification:

BALANCE SHEET, BUFFALO CITY WATER WORKS, DEC. 31, 1890.

2,	Buffalo City Water Works Con-		
	struction	\$ 584,382.00	
3.	Buffalo City Water Works Exten-		
	sion Fund	1,463,203 18	
4.	Bonds Payable		\$3,435,882.00
5.	City Treasurer	186,300.79	
6.	Hydrant and Water Fund		1,889,744.80
7.	Buffalo City Water Works Exten-		
	sion Loan	3,044,419.46	
10.	Redemption Bonds, Sinking Fund,		50,000.00
II.	Dodge Farm Reservoir Construc-		
	tion Account	97,095.05	
I 2.	Frontage Tax Rebate Account	226.32	
18.	Supply Account		463,155.52
40.	Store House		1,807.21
65.	Pipe and Specials		15,787.87
91.	Lead		751.68
I I 2.	General Street Repairs	5,300.61	
133.	Labor Trench Account		3,126.10
141.	Labor Store House	1,023 99	
143.	Meter Repairs	368.82	
145.	Valve Repairs	787.05	
146.	Turning-off Supply	464.92	
151.	Hydrant Repairs	4,928.92	
169.	Store Keeper	. 900.00	

edge Inspector nekeeper aries stler and Assistant		,158 31
	17	
stler and Assistant		,245.98
	I	,550.87
tchman Store House		644.00
amsters	1	,235.00
gineers, Upper Engine House	2	,732.79
emen, " "	I	,193.44
ers, Wipers and Laborers, Up-		
per Engine House	1	,743.50
gineers, Lower Engine House	4	,616.65
emen, " "	7	,224.00
ers, Wipers and Laborers, Lower		
Engine House	10	,270.37
lge Farm Reservoir	34	,954.69
penter	1	,168.32
spect Reservoir Keeper	1	,200.06
w Maps	1	,812.22
is P. Reichert	I	,200.00
	I	,800.00
ζ. Worthington	I	,200.00
rk and Store Keeper, Lower		
Engine House	1	,139.13
vice Leaks		424.34
		890.16
pairs of Free Hydrants, Foun-		
ains and Horse Troughs		370.33
pairs Tools, Store House		4.13
ldings, Lower Engine House.	I	,820.05
d	I	,154.07
erinary		24.00
rses Purchased		445.00
rness Repairs		178.15
	ers, Wipers and Laborers, Up- per Engine House gineers, Lower Engine House	tchman Store House

226.	New Harness Purchased \$	60.00
227.	Wagons and Sleighs Purchased	320,00
228.	Wagon and Sleigh Repairs	845.04
230,	Repairs Store House Building	75 36
231.	New Tools, Store House	211.01
236.	Advertising	460.99
237.	Corporation Cocks and Services,	2,065.21
238.	Fire Hydrant Protection	1,751.72
239.	Street Reservoirs	166.29
241.	Blacksmith Shop	1,543.34
243.	New Tools, Upper Engine House,	2 00
245.	Supplies, " "	348.05
250.	Supplies, Lower Engine House,	3,413.94
254.	South Engine Room, Lower En-	-
	gine House	1,694.77
256.	New Tools, Lower Engine House	130.44
257.	Repair of Tools, Lower Engine	10000
	* House	54.25
258.	General Repairs Machinery, Upper	10000
	Engine House	7.86
259.	General Repairs Machinery, Lower	
•	Engine House	122.42
260.	Repairs Engine No. 1 and Pump	
	Well, Lower Engine House	145.49
261.	Repairs Engine No. 2 and Pump	
	Well, Lower Engine House	280.96
262.	Repairs Engine No. 3 and Pump	
	Well, Lower Engine House	907.86
263.	Repairs Engine No. 4 and Pump	-
•	Well, Lower Engine House	975.43
264.	Repairs Engine No. 5 and Pump	
•	Well, Lower Engine House	90.15

265.	Repairs Engine No. 1, Upper En-	\$	
	gine House	54.0 0	
2 66.	Repairs Engine No. 2, Upper En-	,	
	gine House	632.31	
268.	North Boiler House, Boilers 1 to		
	10, Lower Engine House	576.48	
79	Repairs Boilers 1, 2 and 3, Upper	_	
	Engine House	592.36	•
272.	Coal Hoists, Lower Engine House	295.00	
276.	Repairs of Feed Pumps, Lower	•	
	Engine House	50.83	
279.	Stable Supplies	240.21	
280.	Office Expenses, Printing, etc	2,782.76	
283.	Fuel	60,458.53	
284.	South Boiler House, Boilers 1 to		
	9, Lower Engine House	1,884.04	
3 0 0.	Electric Light Plant, Pumping		
	Station	439.44	
303.	Tapping	2,368.98	
304.	Inlet Pier and Tunnel	6.80	
308.	Thirty-six inch Pipe, Line No. 2,	202.91	
311.	Inspectors	11,781.05	
312.	Ice Elevator	397 32	
314	Repair of Bridges	648.35	
316.	Bird Island Pier	7.50	
318.	Freight and Express	26.81	
319.	Repairs Building, Upper Engine		
	House	4.01	
328.	Setting New Meters	12.73	
338.	Contingent Expense Account		\$11,536.51
345.	New Gaskill Pumping Engine,		
	No. 6	18,978.15	
347.	Railroad Tracks to Coal House	97.22	

352.	City Treasurer \$	595,456.94	
356.	Water Rates		491,947.69
360.	Meter Rates	-	71,250.79
364.	Building Rates		2,459.55
368.	Corporation Cocks		8,657.50
370.	Labor and Supplies		15,399.08
372.	Sale of Old Material		1,590.51
376.	Street Sprinkling		2,228.50
377-	Turn-on Fees		279.00
379-	Circus Rates		15.00
380.	Street Paving		467.47
381.	New Boxes		102.00
389.	Plumbers' License		930,00
383.	Tapping Fines		6.00
384.	Flushing		123.85
387.	New Buildings, Lower Engine		
	House	2,214.61	
402.	Rent of Bell Telephone	323.12	
402.	Meters Purchased	6.29	
405.	Accident Account	257.80	
406.	New Horse Troughs	126.14	
407.	New Bulk Head	247.75	
407.	Gas Account	979.98	
408.	Construction New Tunnel, Con-		
	duit and Pump Well	68.10	
409.	Delivering Bills, Extra Help, etc.	583.00	
409.	Covering Hydrants	2,328.17	
410.	Gas Well Account	3,239.64	
410.	New Double Gate in North Con-		
	duit	400.00	
567.	Jewett avenue	783.42	
5 6 8.	Summit "	466.47	
5 68.	Davis "	412.13	

568.	Georgia street\$	832.74
569.	Durrenberger Place	8,133.76
569.	Elm street	36,346.90
569.	Best "	12,198.24
570.	Masten "	4,678.54
570.	North "	5,938.76
570.	Jefferson "	3,990.73
571.	Dodge "	6,320.78
571.	Highland avenue	99.62
571.	Avenue "A"	381.37
572.	Landon street	492.99
572.	Kingsley "	81.85
57 2 .	Evans "	504.38
573 ·	Roberts "	863. 36
573∙	Roesser "	562.45
573 ·	Austin "	3,088. 30
- 574-	Grant "	2,132.01
574.	Grant "	1,768.76
574.	Bird avenue	2,700.72
575.	Sycamore street	6,731.68
575.	Pearl " ·	2,323.07
57 5·	Chippewa "	2,988.89
576.	Oakwood Place	217.62
57 6.	Prenatt street	110.45
576.	Cleveland avenue	748.78
577.	Main street	277.33
577.	Starin "	1,464.50
577.	Wood "	1,035.39
578.	Tonawanda street	616.77
578.	"	425.13
578.	Gurnsey "	600.98
579.	Lord "	262.59
579.	Grace "	1,862.79

	street\$	946.74
580.	C & "	1,238.73
1.	Lombard "	1,183.92
500.	Schiller street	1,554.38
581.	Benzinger "	1,757.70
581.	Doll "	593.27
581.	Sweet avenue	430.05
582.	East Summer street	588.18
582.	Kentucky street	814.25
582.	Delavan avenue	236.31
583.	Fourth street	1,405.19
583.	North Elm street	569.24
583.	Tyron Place	1,812.41
584.	Richmond avenue	575-49
584.	Livingston street	213.20
584.	Fougeron street	228.56
585.	Winslow street	670.03
585.	Verplanck street	1,197.55
585.	East Market street	144.38
586.	Woodlawn avenue	5,403.13
58 6.	Grote street	611.70
586.	Oakland Place	1,365.21
587.	Breckenridge street	236.15
587.	Kehr "	402.26
587.	Doll "	1,105.42
588.	Lathrop "	668.91
588.	Rodney "	520.52
5 88.	Porter "	231.91
589.	Vincennes "	641.01
589.	Orlando "	732.69
589.	Lathrop "	1,041.22
590.	Hoffman "	399.07
5 90.	Cooper "	95.95

590.	Sherman street\$	31,528.89
591.	Bailey avenue	2,666.65
591.	Babcock street	6,610.94
591.	Maryland "	568.80
592.	Hawley "	1,567.09
592.	Koons "	622.63
592.	Goodyear avenue	687.0 3
593.	Bissell street	674.05
593.	Young avenue	1,097.41
593.	Vanderbilt avenue	288.65
594.	Bush street	957.13
594·	Sandusky street	1,425.54
594.	Milburn "	745.67
595.	Oneida "	400.75
595.	Peck avenue	802.85
595.	Joslyn Place	187.25
596.	Clay street	932.51
596.	Fillmore avenue	76.12
596.	Wohler avenue	512.52
597.	Dempster street	967.41
597.	Goodyear avenue	808.98
597.	Liddell street	1,235.23
598.	French "	6,140.40
598.	Box avenue	2,028.67
598.	Weimar street	920.30
599.	Fillmore avenue	1,397.61
599.	Barthol street	1,048.31
599.	Stanislaus street	1,240.91
600.	Fourth "	276.70
600.	Main "	109.71
600.	Cary "	136.22
601.	Berlin "	561.84
601.	Seneca "	14,727.73

601.	Depew street \$	1,987.66
602.	Beard "	1,196.46
602.	Morris "	1,135.49
602.	Boyd and Grant streets	952.46
603.	Keumple avenue	948.52
603.	Parker "	464.13
603.	Miller "	799.48
604.	Delavan "	560.05
604.	Elmwood "	157.68
604.	Sandusky street	200,00
605.	Miller avenue	1,144.05
605.	Congress street	576.15
605.	Breckenridge street	123.34
606.	Crescent avenue	602.73
606.	East street	337.89
606.	Clinton street	299.61
607.	Delaware avenue	171.81
607.	Lathrop street	980.72
607.	Auburn avenue	558.14
608,	West "	205.37
6 08 .	Bailey "	1,531.08
60 8.	Woehler "	395.00
609.	Rother "	787.20
609.	Phelps street	39 8.49
609.	Halbert "	273.04
610.	Oak "	3,165.20
610.	Fisher avenue	538.43
610.	Breckenridge street	257.43
611.	Southampton "	620.84
611.	Weimert "	336.61
611.	Livingston "	352.85
612.	Niagara "	552.48

THE BUFFALO CITY WATER W	ORKS.
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612.	Seventh street	\$	151.88	
612.	East Summer street		4,184.36	
	Total	\$ 6,46	7,248.63	\$6,467,248.63

BALANCE SHEET OF THE BUFFALO CITY WATER WORKS, JANUARY, 18, 1891.

All accounts in the foregoing balance sheet being closed by transfer to the following ones and under their proper headings.

2.	Buffalo City Water Works Con-	
	struction\$	584,382.00
3⋅	Buffalo City Water Works, Exten-	
	sion Fund r	,748,312.22
4.	Bonds Payable	\$3,435,882.00
5.	City Treasurer	143,547.97
6.	Hydrant and Water Fund	2,167,055.71
7.	Buffalo City Water Works, Exten-	
	sion Loan 3	3,044,419.46
10.	Redemption Bonds Sinking Fund	50,000.00
II.	Dodge Farm Reservoir Construc-	
	tion Account	132,049.74
12.	Frontage Tax Rebate Account	226.32
		,652,937.71 \$5,652,937.71

44

The following statement shows what has been expended by the department from time of purchase to January 1 st, 1891.

EXPENDED BY WATER DEPARTMENT FROM PURCHASE TO DATE.

Original Purchase	\$ 705,000.00
Dodge Farm and other Property	110,826.14
Extensions and Improvements	5,206,108.09
Interest on Bonds	3,669,784.18
Maintenance and Repairs	1,975,019.47
Dodge Farm Reservoir	132,049.74
Cash on hand General Account 119,426.71 Jan. 1, 1891. Dodge Farm 24,121.26	143,547.97
Total	\$11,942,335.59
RECEIPTS.	
Water Rates	\$ 6,469,781.32
Bonds	3,685,882.00
Premium on Bonds	93,059.75

Total\$11,942,335.59

PRESENT STANDING OF THE PRINCIPAL WATER WORKS ACCOUNT.

	Jan. 1, 1890.	Added during the year.	Jan. 1, 1891.
Original purchase	\$705,000 00		\$705,000.00
Real Estate, including taxes			1 10, 826. 14
Engines	240,998.58	• • • • • • • • • •	240,998.58
Holly Pumping House	12,092.25	. .	12,092.25
Holly Pumping Machinery	41,307.41		41,307.41
New Engine House	86,478.34		86,478.34
Gas Well	9,406.44	\$3,239.64	12,646 08
Inlet Pier and Tunnel	555,175.53		555,175,53
Main Pipes, Branches, Hydrants, etc	3,508,208.68	256,416.85	3,764,625.53
Coal and Boiler House and Chimney	26,711.53		26,711.53
Gaskill Engine No. 4	94,892 44		94,892.44
Coal Tunnel connecting Upper and Lower House	4,524.53	,	4,524 53
New Valve House	910.70		910.70
Overhead Crossing	1,447.87		1,447.87
New Boiler House	8,497.19		8,497.19
Electric Light Plant	3,687.24		3,687.24
Repairs, Boilers and moving same	5,417.65		5,417.65
New Cylinder Boilers	5,000.00		5,000.00
New_Buildings	100,088 43	5,729.43	105,817.86
Ice Elevators	1,737.98		1,737.98
New Reservoir	99,567.20	34,954.69	134,521 89
Gaskill Engine No. 5			94,750.00
Electric Light and Telephone Cables			
to Inlet Pier	1,330 30		1,330.30
R. R. Tracks, L. P. S	2,123.37	97.22	2,220.50
New Tunnel, Conduit and Pump Well.	31,833.30		32,481.05
Gaskill Engine No. 6	70,008.50		88,986.65
Total	\$5,822,021.60	\$320,063.73	\$ 6,142.085.33

WATER BONDS.

Bonds outstanding December 31, 1890, issued for the purchase, extension and improvement of the Water Works.

Date of Issue,	Rate of Interes	When Due,	Amount.
1, 1871	7	Jan. 1, 1891	\$100,000.00
1, 1871		Aug. 1, 1891	50,000,00
1, 1871		Oct. 1, 1891	100,000.00
1, 1872		Oct. 1, 1892	100,000,00
1, 1872		Dec. 1, 1892	100,000.00
1, 1873		Sept. 1, 1903	200,000.00
1, 1874		April I, 1905	100,000.00
1, 1874		July 1, 1906	100,000.00
1, 1874		Aug. 1, 1908	100,000.00
1, 1874		Oct. 1, 1908	79,382 00
1, 1875		Aug. I, 1909	100,000.00
1, 1876	7	Jan. 1, 1896	50,000.00
1, 1876	6	July 1, 1896	100,000,00
2, 1878		Sept. 2, 1898	50,000.00
5. 1879		April 25, 1898	100,000,00
6, 1880		April 26, 1899	100,000.00
1, 1880		July 1, 1904	50,000.00
1, 1880		Sept. 1, 1904	100,000.00
6, 1880		Nov. 26, 1897	64,000.00
5, 1881		April 25, 1900	100,000.00
1, 1884		April I, 1901	90,000.00
1, 1885		July 1, 1905	100,000.00
1, 1886		Oct. 1, 1903	100,000.00
1, 1887		March I, 1906	100,000.00
1, 1887		April 1, 1906	50,000.00
1, 1888	247	June 1, 1902	100,000.00
5, 1888		June 15, 1908	57,500.00
5, 1888		June 15, 1914	275,000.00
1, 1888	31/2	Dec. 1, 1909	100,000.00
1, 1889		May 1, 1919	225,000.00
1, 1889		Aug. 1, 1909	100,000.00
1, 1889		Oct. 1, 1909	145,000.00
1, 1890		Jan. 1, 1910	50,000.00
1, 1890		July 1, 1910	100,000.00

INTEREST PAID ON WATER BONDS DURING 1890.

January 20th	\$ 12,250.00
February 17th	12,000.00
March 24th	27,240.87
April 21st	5,217.50
May 19th	12,818.75
June 23d	18,875.00
July 21st	12,250.00
July 28th	12,000.00
September 22nd	27,240.87
October 20th	5,217.00
November 18th	12,818.75
December 15th	17,125.00

^{\$ 175,054.24}

COMPARATIVE STATEMENT.

Revenue received, cost of maintenance, coal consumed, water pumped, cost of extensions and improvements, and pipe laid annually. For twenty years.

	Maintenance	Trans.		Washington, A		-	ribe.	Laci	rear.
Revenue.	Repairs,	Consumed, Tons.	Water Pumped. Gallons.	Daily, Gallons,	and Improvements.	Miles.	Feet.	Miles.	Feet.
\$124,865.00	\$ 77,456.95	3,645	2,775,752,490	7,604,801	284,297.84	67	4,644	:	1
138,150.00		4,546	3,226,891,140	8,840,797	355,492.46	77	2,921	6	3,557
168,267,20		4,720	3,329,193 162		308,600 46	81	4,912	4	1,001
176,219.10		2,852.50	3,040,012,107		307,355.64	98	4,905	4	5.273
184,516.48		3,422.67	3,828,594.027		159,098.75	16	1,591	4	I,966
191,335,84		3,357.88	4,020,936,278		106,900.21	92	4.931	1	3,340
189,296.90		3,249	4,267,218,162	_	17 014.05	93	2,631	* 4	2,980
200,183.28	_	3,524.50	4,589,879,986	_	48,555.32	16	3,376	1	745
205,415.75		3,979.75	5,291,337,520	_	11,457.50	97	626	0	2,530
216,214.37		5,809	5,993 009,343		161,883.89	102	873	10	247
210,031.46		7,192.80	6,344,182,224	_	201,487.10	114	4,149	12	3,276
362,762.07			7,076,212,870		160,617.81	131	524	91	1,655
426,353 57		8,811	8,568,435,200		200,029.90	150	529	18	5,135
381,581,64		9,128	8,789,971,200		186,623.92	164	2,931	14	2,402
444,440.77		10,503	10,441,393 340	_	327,918.82	101	830	27	I.474
477,209 57		11,280	12,069,882,676	33,068,172	342,493.57	213	1,218	22	388
476,411.87		11,374	14,033,297,522	38,484,936	209,542,10	232	2,245	21	2,780
494,777.52		12,318+	15,545,365,450	42,590,042	428,505.68	252	403	21	1.250
542,952.35		7.553‡	16,451,247,645	45,071,911	595,624 20	277	1.877	26	4.880
505.156.04		7.2228	17.340,104 076	47 617 197	200000	200	2010	490	a Ton

This includes one mile, a,636 feet of large mains laid to replace small ones

There was used of natural gas as fuel the equivalent of 3,288 tons coal, coating \$31,706 46.

There was used of natural gas as fuel the equivalent of 9,033 tons coal, coating \$31,706 46.

There was used of natural gas as fuel the equivalent of 9,033 tons of coal, coating \$31,706.46.

SCHEDULE OF BILLS AND ACCOUNTS.

Approved During the Year 1890 by the Water Board and Paid by the City Treasurer.

Date.	Name.	Description	. A n	nount.
Jan 6	Weekly Pay Roll	Wages of laweek ending	Jan.4th,	4.88
" 13	, " "	Wages of l	aborers,	4.00
" 20	, " "	11th, 1890 Wages of l week endin	aborers,	7.75
Tan. 20	Buffalo Natural Gas Fuel	18th, 1890	37	7.89
J. = -	Со			
"	Duffele Com Iven Dine	ber, 1879	86	9.34
••	Buffalo Cast Iron Pipe	Cast Iron Pi Special Casti	•	23.95
44	Buffalo Cast Iron Pipe			3.33
	Co	Special Casti	•	0.04
"	Buffalo Cast Iron Pipe	Cast Iron P	-	
"	Buffalo Cast Iron Pipe	-	ngs 3,41	16.13
	Со		pe and ngs 2,59	91.09

341		
Jan.	Buffalo Cast Iron Pipe	
11100	CoCast Iron Pipe and	
	Special Castings	\$ 3,582.49
44	Buffalo Cast Iron Pipe	
	CoCast Iron Pipe and	
	Special Castings	374.88
	Buffalo Cast Iron Pipe	
	Co Cast Iron Pipe and	
	aial Castings	33.86
44	Buffalo Cast	
	Co Iron Pipe and	
	seial Castings	3,545.76
**	Buffalo Cast Iron	
	Co Iron Pipe and	
	Special Castings	4,445.00
66	Buffalo Cast Iron Pipe	
	Co	
	Special Castings	132.94
**	Buffalo Cast Iron Pipe	
	Co	
	Special Castings	30.91
"	Buffalo Cast Iron Pipe	
	CoCast Iron Pipe and	
	Special Castings	41,63
"	Buffalo Cast Iron Pipe	
	CoCast Iron Pipe and	
	Special Castings	4,089.91
	Buffalo Cast Iron Pipe	
	CoCast Iron Pipe and	
	Special Castings	6 ,9 80.37
66	Buffalo Cast Iron Pipe	
•	CoCast Iron Pipe and	
	Special Castings	319.32

Adams & White Office supplies

80.65

"

200		
	Adams & White Office supplies	33.88
"	Adams & WhiteOffice supplies	53-75
"	Enterprise Oil CoBoiler Compound	60.00
**	Buffalo Brick Mfr's, Ass'nBrick	19.50
**	Howard Iron WorksBolted branches	50.00
**	Fox & HollowaySand	24.37
16	Weekly Pay Roll Wages of laborers week ending Jan. 25,	
	Weekly Pay I es of laborers	398.38
	k ending Feb. 1,	
	D	513.75
"	Monthly Pay y of the Commis- ers and regular employees for Janu-	
	ary, 1890	7,430.40
**	F. B. Gallagher, cashier, Postage	50.00
- 66	Buffalo Natural Gas	-
	Fuel CoGas used for fuel in	
	month of Jan., 1890.	574.74
Feb. 10,	Weekly Pay Roll Wages of laborers week ending Feb. 8,	37177
	1890	572.50
Feb. 17,	Miller BrosRepairing wagons	20.65
"	Lockwood & OughOffice sundries	52.15
"	S. D. ColieLumber	55.50
46	Hardwicke & Ware Machine work	13.68
"	J. H. Ruckel & Co Sundry supplies for	
	engines	95.04
	Holly Mf'g Co., Lock-	
	port, N. YRepairing engines and	
	boilers	539-35

TWENTY-SECOND ANNUAL REPORT OF 54 Feb. 17, Geo. E. Matthews & Co. Subscriptions to Morning Express \$ 3.68 Star Oil Co.....Oil 203.29 16 Star Oil Co.....Oil 188.79 16 Powell & Plimpton....Flax seed..... 5.76 44 Jabesh Harris......Soft soap..... 7.20 Whittett, Barrett & Co.Packing, etc. for engines 46.83 Whittet, Barrett & Co.. Packing, etc. for engines 64.38 C. J. Hamilton.....Lumber 77.83 Weekly Pay Roll Wages of laborers week ending Feb. 15, 1890 421.42 Feb. 24, Weekly Pay Roll Wages of laborers week ending Feb. 22, 1890 279.48 Monthly Pay Roll Sal. Commissioners and regular employes for February..... 7,131.33 March 3, Farrar & Trefts......Repairs to machinery 267.05 The Times......Advertising..... 66 50 " Buffalo Demokrat.....Advertising....... 26.25 Geo. E. Matthews & CoAdvertising..... 10.00 " E. H. Butler Advertising 13.00 " Goodyear Rubber Co.. Rubber hose, etc.... 11.17 " Buffalo Sewer Pipe Co. Sewer pipe..... 9.75 " M. Riter.....Repairs to boilers.... 3.25 " M. Riter..... Repairs to boilers.... 3.50 " Fries & Co......Corporation Cocks... 88,20 Beals & Brown...... Hardware 35 23 " James Boland......Mason work...... 165.30 C. W. MillerCoach hire..... 7.50

Jaroh	Holly Manufacturing	
viaich 17	Co, Lockport, N. Y. Payment on contract.	Sun non no
- 66	Buffalo Cast Iron Pipe	0,0,000,00
	Co	
	Special Castings	
u	Buffalo Cast Iron Pipe	
	Co Cast iron pipes and	
	special castings	59.70
"	Buffalo Cast Iron Pipe	
	CoCast iron pipes and	
	special castings	5.72
"	Buffalo Cast Iron Pipe	
	Co Cast iron pipes and	
	special castings	55.33
	Buffalo Cast Iron Pipe	
	CoCast iron pipes and special castings	6.19
46	Buffalo Cast Iron Pipe	0.19
-	Co	
	special castings	
"	Buffalo Cast Iron Pipe	4.56
	Co	
	special castings	260.86
"	Buffalo Cast Iron Pipe	
	Co Cast iron pipes and	
	special castings	102.00
"	Buffalo Cast Iron Pipe	
	CoCast iron pipes and	
"	special castings	242.77
••	Buffalo Cast Iron Pipe	
	Co	
	special castiligs	1,700.02

April 7	, Powell & Plympton Horse medicine \$	4.00
н	James Boland Mason work	26.00
- 11	James BolandMason work	197.98
44	W. H. H. Newman &	
	CoIron	7.80
- 14	Chas. J. HeinoldOats	79.50
44	Fries & Co Corporation cocks	73.88
**	Farrar & Trefts Machine work	128.33
14	Beals & Brown Hardware sundries	142.38
.40	Star Oil CoOil	172.41
24	Enterprise Oil CoCompound	48,00
14	J. H. Ruckel & Co Supplies for engines	25.23
40	J. H. Ruckel & Co Engine fittings	7.50
44	C. J. Frank, Holland,	
	N. Y Handles for tools	50.75
- 44	R. H. Thayer & Co Hydrant boxes	115.00
46	Matthews, Northrup &	1000
	Co Blank books, etc	141.25
	The Eddy Valve Co Valves	1,207.25
66	Weekly Pay Roll Wages of laborers,	
	week ending April 5,	
	1890	289.50
"	Lockwood & OughDraughtsman's sup-	
	plies	4.60
"	Joseph Churchyard's	
	SonsLumber for flooring	350.00
April 14	, Miller BrosWagon repairs	50.15
"	Star Oil CompanyOil	163.78
"	W. U. Telegraph CoWire and messenger	
	service	2.89
"	A. Spitzmiller & Sons Fire pot	3 50
"	Sidney Shepard & Co Hardware sundries	65.11
"	E. H. ButlerAdvertising	11.36
	-	-

2,684.79

60 TWENTY-SECOND ANNUAL REPORT OF April 21, Buffalo Democrat Advertising \$ 5.25 Geo. E. Matthews & Co. Advertising 7.50 44 Matthews, Northrup & Co Office blanks and new maps....... 9.50 46 The Courier Co..... Advertising 2.35 .. Howard Iron Works...Bolted branches..... 33.00 ** Barber Asphalt Paving Co..... Repairing pavements. 22.33 Buffalo Cast Iron Pipe. Co..... Cast iron pipe and 4,457.42 Buffalo Cast Iron Pipe Co......Cast iron pipe and 83.33 Weekly Pay Roll..... Wages, laborers, week ending April 19, 1890 1,721.14 April 28, Weekly Pay Roll Wages, laborers, week ending April 26, 1890 2,111.38 Monthly Pay Roll Salary Commissioners and employees for April, 1890..... 7,020.62 " Thomas Sutton..... Payment on contract (gas well),..... 350.00 5, Weekly Pay Roll..... Wages, laborers, week May ending May 3, 1890. 1,838.66 F B. Gallagher, Cash'r. Postage and incidentals..... 50.00 Buffalo Gas Light Co.. Gas for month of April 26.64 Weekly Pay Roll......Wages, week ending May 10th, 1890..... 1,712.58 N. Y. C. & H. R. R'y Co. Freight on iron beams 17.17 " The Pottsville Iron & Steel Co...... Iron beams..... 186.39

Man	_	Thomas Sutton Boumant on contract	
May	5,	Thomas SuttonPayment on contract	
M		(gas well)\$	300 00
мау	19,	Weekly Pay RollWages, laborers, week	
	_	ending May 17, 1890	1,892.62
May	26,	Joseph Churchyard's	_
		SonsLumber	294.56
	"	Joseph Churchyard's	•
		Sons Office partition	119.00
	"	Jacob GintherHeavy grated gutter.	45.15
	"	The Eddy Valve CoValves	1,600 00
	"	The Eddy Valve CoValves	1,723.00
	٠.	The Eddy Valve CoValves	1,200.00
	"	The Barber Asphalt	
		Paving Co Repairing pavements.	23.67
	"	The Barber Asphalt	
		Paving CoRepairing pavements.	84.50
	"	The Barber Asphalt	
		Paving Co Repairing pavements.	9.43
	"	The Barber Asphalt	
		Paving Co Repairing pavements.	8.00
	"	S. Somerville & SonDoctoring horses	19.00
	"	W. H. Keeler Making and repairing	
		stamps	6.45
	"	Lockwood & OughRubber bands, etc	7.05
	"	Leonard Hettrich, Jr Repairing pavements.	450.21
	"	Buffalo Storage and	
		Carting CoHauling pig lead	45.00
	"	Buffalo Storage and	
		Carting Co Hauling Valves	16.00
	"	Williamsville Lime Co.Cement	2 4.00
	"	Buffalo Gas Light Co, Coke and cartage	17.50
	"	James Boland Mason work	² 53·55
	"	John C. Hagen Plumbing	2.10

62 TWENTY-SECOND ANNUAL REPORT OF May 26, Weed & Company Nails 14.45 Otto Ulbrich Crayons20 Becker & Wickser. ... Harness repairs 39.95 44 Farrar & Trefts..... Engine repairs 154-97 46 Russell & Watson....Storehouse supplies... 2.80 Miller Bros...... Wagon repairs 89.00 Lesswing & Stines Wagon repairs and new wagons 364.25 Beals & Brown Hardware sundries ... 56.97 16 510.10 The Times Advertising 9.00 Atlas Refining Co.... Cast iron pipes..... 78.50 46 Whittet, Barrett & Co. . Repairs to engines . . . 101.67 C. J. Hamilton..... Lumber 80,66 Star Oil Company Oil 139.16 16 Scatcherd & Son..... Oak lumber 12.25 .. John McCombSoft soap 7.60 11 Reinecke & Zesch ... Advertising 36.00 87.37 12 Little, McDonald & Co. Repairs to electric light plant 112.53 " Bingham & Taylor....Castings, valve boxes, 296.95 " Whittet, Barrett & Co. White waste, etc..... 23.32 " A. D. Cronk & Co....3 horses 445.00 " Goodyear Rubber Co. Rubber goods...... 68.00 Buffalo Natural Gas Fuel Co..... Gas used for fuel in March and April, '90 6,383.02 Weekly Pay Roll Wages laborers, week ending May 24, '90. 1,738.31 " Ludlow Valve Mfg. Co. Valves 19.50 .. C. J. Hamilton Lumber

	THE BUFFALO CITY WATER WORKS.	63
May 26,	The Bell Telephone Co. Rent of telephone \$	25.00
"	Buffalo Steam Pump Co. Repairs to pumps and	-
	engines	55.65
"	W. & L. E. Gurley chain tape	25.00
"	The Courier Co2 copies 3 months and	•
	advertising	6.10
66	H. G. Trout Machine work on bolts	4.48
46	Buffalo Refining CoOil	20.00
"	W. A Case & SonCementing boiler dome	
	and pipes	137.06
	Howard Iron WorksBolted branches, etc	110.60
**	Howard H. Baker & Co.Rope and sundries	6.81
• •	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
`	specials	4,114.50
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
	specials	214.40
46	Buffalo Cast Iron Pipe	
	Co Cast iron pipe and	
•	specials	3,161.67
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
	specials	85.17
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
	specials	4,006.22
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	_
	specials	15.26
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
	specials	4,324.99

64 TWENTY-SECOND ANNUAL REPORT OF May 26, Buffalo Cast Iron Pipe Co......Cast iron pipe and specials \$ 67 50 Monthly Pay Roll Pay roll for month of May, 1890 6,950.60 Weekly Pay Roll Wages of laborers for week ending May 31, 1890 1,712.75 June 2, Buffalo Gas Light Co. Gas for month of May, 34.08 1890 O'Brien & Clark Payment on contract, 5,500.00 (new reservoir).... Thomas Sutton..... Payment on contract, (gas well) 1,000,00 Buffalo Natural Gas Fuel Co......Gas used for fuel in May, 1890..... 3,605.71 Weekly Pay Roll Wages of laborers for week ending June 7, 1,714 28 " Jas. D. Warren's Sons. Blanks and printing... 3.50 " Jas. D. Warren's Sons. Advertising 27.84 " Jas. D. Warren's Sons. Blanks and printing... 19 50 " Queen City Metal Co.. New tools store house 30.70 " Queen City Metal Co.. New tools store house 30.00 " Geo E. Matthews & Co. Advertising 6.25 June 16, James Boland...... Mason work 153.10 D. McNaughton.....Machine shop work.. 468.06 " Ludlow Valve Mfg. Co. Rubber rings...... 6.00 " Buffalo Rubber Co....Sundry rubber goods. 113.64 " Hardwicke & Ware ... Corporation cocks, etc 382.63 Fries & Co......Corporation cocks, plugs, etc.... 147.49

June 23.	Bingham & Taylor Valve boxes, vaults,	
J	etc	358.61
44	James Boland Mason work	187.60
34	James Boland Mason work	246.25
10	John C. Post Paint brushes, etc	82.60
(44)	Whittet, Barrett & Co White waste	9.88
46	Otto UlbrichInk	1.80
**	Louisa BrechtelWashing towels	9.90
- 11	Fowler & SonsIron and steel	12,33
a	John Lyth's Sons Pipe elbows, etc	54.62
	Holly Manufact's Co Repairing engines	5.19
	Holly Manufact's Co Repairing engines	33.70
. 0	Hardwicke & Ware Saddle bands, etc	6 25
**	Weed & Co Hardware sundries	12.67
"	Star Oil CoOil	128,12
34	Buffalo Gas Light Co Coke and cartage	30.00
- 6	John McCombSoft soap	4.00
.66	Becker & Wickser New harnesses	60.00
**	The Eddy Valve CoValves	201,00
**	Dake Engine Mfg. Co. Hoisting engines	295.00
"	William KingSodding	41.63
"	Leonard Hettrich, Jr Repairing pavements.	1,157.71
"	Weekly Pay Roll Wages, laborers, week	
"	ending June 21, 1890 F. B. Gallagher, Cash'r. Postage and incident-	1,607.71
	als	50.00
44	Louis H. Knapp, Supt. Sundry advances for	
	freight, etc	23.51
"	Buffalo Cast Iron Pipe	
	CoCast iron pipe and	= 6
44	specials Buffalo Cast Iron Pipe	5,001.06
	Co Cast iron pipe and	
	specials	4,602.58



July 7,	James Boland Mason work \$	123.86
"	W. E. Beilman Repair'g lawn mower.	1.75
"	Godfrey E. HeiserHay	126.21
**	C. E. BrinkworthRibbons for stamp	4.00
"	Beals & BrownHardware sundries	5-74
**	Geo. E. Matthews & Co. Advertising	8.75
"	Times Printing House. Postal Cards, etc., and	
	Printing	122,00
"	Edward B. Smith Rent of lot for storage	75.00
44	The Bell Telephone Co.Rent of telephone	128.00
46	Moses BrosOil pump	22 00
"	Scheeler & SonsWire frames	36.63
46	Jas. D. Warren's Sons. Advertising	18 00
**	German Boiler Com-	
	pound CoBoiler compound	44 40
**	E. H. ButlerAdvertising	13.00
"	Jas, D. Warren's Sons, . Blanks for office	88.75
"	Adams & White Blank books, etc	50.85
July 14,	Weekly Pay Roll Wages, regular em-	
	ployes, week ending	
	July 5, 1890	443.07
**	Weekly Pay Roll Wages, laborers, week	
	ending July 12, 1890	1,923.67
"	Thomas SuttonPayment on contract,	
186	(drilling gas well)	750.00
**	M. Kurchoff & SonsPainting	195.00
**	Buffalo Gas Light Co Gas for June, 1890	39.96
**	Jewett EstateReturned money ad-	-
**	vanced to lay pipe	783 42
"	Buffalo Cast Iron Pipe	
	Co	.6
**	Buffalo Cast Iron Pipe	26.53
	CoCast Iron Pipe and	
	Specials	4,478.60
		1344

July 19, 1890.....

Cocast iron pipe and

"

Buffalo Cast Iron Pipe

specials

specials

5.64

2,695.54

Aug.	4, Buffalo Cast Iron Pipe	
	CoCast iron pipe and	
	specials	\$ 234-53
**	Buffalo Cast Iron Pipe	
	Co	
	specials	2,759.11
16	O'Brien & Clark Payment on contract	71.02
	(new reservoir)	6,556.25
**	W. F. Worthington Paid for injury to J.	100
	C. Farmer and G. W.	
	Fleckner	100.00
46	Weekly Pay Roll Wages, laborers', week	
	ending Aug 2, 1890,	
	and Belt Line tickets	1,888.80
**	Weekly Pay Roll Wages, regular em-	.,
	ployes, week ending	
	Aug. 2, 1890	691.83
	The Eddy Valve CoValves	130.00
"	Sherwood Mfg. CoFlint glasses	.70
	Hardwicke & WareReducing sockets	
"	The Courier Co2 copies city directory	-51
	for 1890	9 00
Cont	I John Lyth's SonsSewer pipe, etc	18.26
Sept.	C. J. HamiltonLumber and sawdust.	
		96.27
**	Miller BrosWagon repairs	25.30
**	Star Oil CoOil	122.38
"	Lockwood & OughOffice supplies	43.67
"	Fries & CoCorporation cocks, etc	237.16
	M. RiterRepair streets and	
	boilers	99.63
**	H. D. Taylor Leather washers	2.70
	H. G. TroutTemplate and fitting	1000
	same	23.86
46	A. Neupert & CoWindow shades	2.59

special castings....

74 TWENTY-SECOND ANNUAL REPORT OF

Sept. 1,	Buffalo Cast Iron Pipe	
	CoCast iron pipes and .	
	special castings \$ 3,631.48	
	Buffalo Cast Iron Pipe	
	CoCast iron pipes and	
	special castings 2,660.95	
"	Buffalo Cast Iron Pipe	
	CoCast iron pipes and	
	special castings 155.03	
u	Monthly Pay RollSalaries, Commission-	
	ers and employes,	
	August 1, 1890 2,734.95	
36	Monthly Pay RollSal., employes, Dodge	
	Farm reservoir, Aug-	
	ust 1, 1890 125.00	
"	Robert Oehmig, City	
	TreasurerWages, laborers for	
	three weeks ending	
	August 23, 1890 5,412.27	
"	Robert Oehmig, City	
	TreasurerWages, regular em-	
	ployes for three weeks	
	ending Aug. 23, 1890 3,069.23	
44	Robert Oehmig, City	
	TreasurerWages, Dodge farm	
	employes three weeks	
"	ending Aug. 23, 1890 138.24	
••	Weekly Pay RollWages, laborers, week	
"	ending Aug. 30, 1890. 1,686.87	
••	Weekly Pay RollWages, regular em-	
	ployes, week ending	
"	August 30, 1890 1,115.16	
••	Weekly Pay RollWages, Dodge Farm	
	employes, week end-	
	ing August 30, 1890. 48.78	

Sept. 8,	J. H. Ruckel & CoLabor and supplies \$	131.82
**	O'Brien & Clark Payment on contract.	8,253.77
**	Buffalo Natural Gas	
	Fuel Co Natural gas for Aug	3,660.77
40	J. H. Ruckel & CoLabor and supplies	57.63
	The Courier Co2 copies daily Courier	4.00
"	Buffalo Gas Light Co Gas bills for August	52.56
	Weekly Pay Roll Wages, laborers, week	
	ending Sept. 6, 1890.	1,168.92
**	Weekly Pay RollWages, regular em-	
	ployes, week ending	
	Sept. 6, 1890	1,008.10
**	Weekly Pay Roll Wages, employes res-	
	ervoir, week ending	
	September 6, 1890	41,08
"	Bingham & Taylor Valve boxes, etc	364.86
"	The Barber Asphalt	
	Paving Co Repairs to pavements.	57.85
-11	The Barber Asphalt	
	Paving Co Repairs to pavements.	84.76
**	Lockwood & Ough Ink and paper	5.30
**	Fairbanks & Co Testing scales	5.10
44	Homeopathic Hospital.Ambulance service	6.00
**	Buffalo Paint & Color	
	CoOil and glass	97.07
	Times Printing Co Water bills, envelopes,	
	etc	95.80
**	Walbridge & Co Barrows and lantern	
	globes	24.75
u	S. D. ColieLumber.	25.50
**	G. D. BarrPure packing	76.50
Sept. 15,		7,504.19
"	Kansas City M. & R. Co Pig lead	4,400.88
"	C. W. Miller Coach hire	3.50

Sept. 15,	The Times Advertising \$	9.00
"	Star Oil CoOil	87.37
**	Lesswing & Stines Wagon repairs	27.40
- 66	Woolley & GerransBoard of Consulting	
	Engineers	3.25
"	W. F. Pratt & Co Oats for horses	116.96
"	W. H. H. NewmanLead	501.55
"	Hugh McDonald Horse shoeing	18.40
**	The Dold Packing Co. Lard Oil	56.81
"	Buffalo Gas Light Co Coke	21.00
**	Queen City Metal Co Repairs to tools	25.55
- 44	Engineering News Pub-	
	lishing Co	
	Water Works	3.00
46	Engineering News Pub-	
	lishing CoSubscription to En-	
	gineering News	5.00
"	Wm. Anderson Diving at pump house	20.00
"	Goodyear Rubber Co Pure packing	27.50
**	H. Williams & CoRoofing, etc	52.69
**	S. D. ColieLumber	146.90
"	Cornell Lead Co Pig lead and pipe	551.06
**	Cornell Lead Co Pig lead and pipe	53.62
"	Cornell Lead Co Pig lead and pipe	34.32
- 16	Cornell Lead CoLead pipe	37.53
"	Cornell Lead Co Lead pipe	34-72
"	Irlbacker & DavisGas fittings	30.07
"	The Eddy Valve CoValves, etc	139.00
"	Farrar & Trefts Repairing Eng. No. 4.	117.09
**	C. J. HamiltonLumber and sawdust.	182.12
"	Ludlow Valve Mfg. Co. Valves, etc	88.80
- "	Becker & WickserHarness repairs	75-55
**	Leonard Hettrich, JrRepairing pavements.	1,480.73

Sept. 15,	Weekly Pay RollWages, laborers, week		
	ending Sept. 13, 1890	\$ 90	5.91
"	Weekly Pay Roll Wages, regular em-		
	ployes, week ending		
	Sept. 13, 1890	1,03	0,62
66	Weekly Pay Roll Wages, regular em-		
	ployes, new reservoir,		
	week ending Sept.		
	13, 1890	4	1.08
**	Semi-Monthly Pay Roll.Salaries Commission-		
	ers and regular em-		
	ployes for first half		
	of September	1,36	7.45
**	Semi-Monthly Pay Roll, Salaries, employes new		
	reservoir for first half		
	of September	6	2.50
Sept. 22,	Matthews, Northrup &		
	CoOffice stationery	4	0 50
"	Beals & BrownHardware sundries	2	6.56
**	Jas. D. Warren's Sons. Stationery and print'g.	12	7.00
-44.	Weed & Co Nails, etc		3.10
"	Hardwicke & WareLabor cutting pipe		1.60
**	John MartinCoach hire		8.00
- 44	E. L. Hedstrom Blossburg coal	1	1.25
**	Fox & HollowaySand		9.38
"	French & Kirkholder Brooms, etc		4.55
**	Geo. V. Goll Turning drum for der-		
	rick		3.00
"	Buffalo Brick Manufac-		
	turers AssociationBrick	1	7.55
**	Bingham & Taylor Valve castings		37.00
**	Whittet, Barrett & Co White waste, etc	2	2901
"	Enterprise Oil CoCompound	7	2.00
"	J. H. Ruckel & Co Packing and labor	2	28.02

78 TWENTY-SECOND ANNUAL REPORT OF Sept. 22, Hammond & Guild Repairing clock \$ 1.50 John Lyth & Sons.....Sewer pipe, etc..... 33.53 44 D. McNaughton Iron and labor 61 48 44 Farrar & Trefts..... Repairs to engines... 207.60 Jas. D. Warren's Sons. Office supplies and Printing 66.00 14 M. Riter Repairing boilers 217.89 w Machwirth Bros..... Material and labor, repairing buildings... 191.27 W. U. Telegraph Co... Telegraph and messenger service..... 5.67 44 M. Riter Repairing boilers.... 225.22 Weekly Pay Roll Wages, laborers, week ending Sept. 20, 1890 1,046.40 " Weekly Pay Roll Wages, Dodge Farm reservoir, week ending Sept. 20, 1890 ... 41.08 46 Weekly Pay Roll Wages, laborers, on trench, week ending Sept. 20, 1890 982.85 " F. B. Gallagher, Cash'r. Postage & incidentals. 50.00 " Buffalo Cast Iron Pipe. Co..... Pipe and special castings..... 49.73 " Buffalo Cast Iron Pipe Co.....Pipe and special castings..... 2,486.51 Buffalo Cast Iron Pipe Co.Pipe and special castings..... 1,377.50 " Buffalo Cast Iron Pipe Co.Pipe and special castings..... 14.16 Weekly Pay Roll Wages, laborers, week ending Sept. 27, 1890 657.56

Sept. 22,	Weekly Pay RollWages, regular employes, week ending	•
	Sept. 27, 1890	\$ 1.075.28
"	Weekly Pay Roll Wages, employes	Ψ -,-,,
	Dodge Farm reservoir,	
	week ending Sept. 27,	
	1890	41.08
"	Semi-Monthly Pay Roll Salaries, last half of	4
	September, 1890	1,367.52
"	Semi-Monthly Pay Roll.Salaries, Dodge Farm	-,3-7-3-
	employes, last half of	,
	September	62.50
Oct. 6,	Weekly Pay Roll Wages, laborers, week	3
ŕ	ending Oct. 4, 1890.	648.24
"	Weekly Pay Roll Wages, regular em-	
	ployees, week ending	
	Oct. 4, 1890	1,067.71
44	Weekly Pay Roll Wages, Dodge Farm	,
	reservoir, week end'g	
	Oct. 4, 1890	41.08
"	O'Brien & ClarkPayment on contract.	4,068.57
"	Buffalo Natural Gas	
	Fuel CoNatural Gas for Sep-	
	tember, 1890	2,884.22
Oct. 13,	Buffalo Gas Light CoCoke and cartage	3.00
"	Buffalo Gas Light CoGas bills for Sept	55.32
	C. J. HamiltonLumber and sawdust.	71.10
44	The Eddy Valve CoValves and gearing	72.00
"	Buffalo Cast Iron Pipe	•
	Co Pipe and special cast-	
	ings	29.10
"	Buffalo Cast Iron Pipe	
	Co Pipe and special cast-	
	ings	1,533.12

Oct	. 13,	Buffalo Cast Iron Pipe	
		CoPipe and special cast-	
	22	ings \$	1,629.27
	46	Buffalo Cast Iron Pipe	
		CoPipe and special cast-	201
	"	ings	9.54
		Lockwood & Ough Draughting ink, etc	3-15
	a	John W. Griffin Hose bibbs and swivels	3.50
	"	John MartinCoach hire	3.50
	"	Walbridge & Co Cylinder castings, etc.	5.80
	"	C. C. PenfoldInspectors' badges	15.00
	**	M. RiterRepairing boilers	299.05
	"	M. RiterRepairing boilers	222.75
		F. H. C. Mey Elevator chain and	.0.
	ii	sprocket wheel	181.00
	**	Hall & Sons Fire clay, fire brick, etc.	23.00
	**	Jas. D. Warren's Sons. Blank books and print-	25.00
	11	ing	51.00
	66	The Barber Asphalt	4.00
		Paving CoRepair'g asphalt pave-	
		ments	20.42
	**	E. D. ColieLumber	30.43
	44	Buffalo Brick Manufac-	91.40
		turers' AssociationBrick	6.50
	**	Gay & MilsomCasing and cap	5.00
	**	W. H. H. Newman & Co.Sheet iron and rivets.	5.68
	**	Goodyear Rubber Co Rubber boots	5.50
	**	Semi-Monthly Pay Roll.Commissioners and	2.50
		regular employes'	
		salaries for first half	
		of Oct., '90	1,367.46
	46	Semi-Monthly Pay Roll. Employes Dodge farm	1,307,40
		reservoir for first half	
		of Oct., 1890	62.50
		or occ., rogo	02.50

82 TWENTY-SECOND ANNUAL REPORT OF Oct. 22, Weed & Co...... Nails and files..... \$ 5.15 J. J. McWilliams, Agt . Communication to pay for coal 3,826.26 Weekly Pay Roll Wages, laborers, week ending Oct. 18,1890. 481.16 Weekly Pay Roll Wages, regular employes, week ending Oct. 18, 1890..... 1,103.73 Oct. 27, Weekly Pay Roll Wages, laborers, week ending Oct. 25, 1890 373.62 Weekly Pay Roll Wages, regular employes week ending Oct. 25, 1890..... 1,092.22 Semi-Monthly Pay Roll.Salaries for last half of October 1,429.95 Nov. 3, Buffalo Refining Co....Oil 35-35 M. Riter Repairing boilers 248.33 46 Howard Iron Works... Material and labor ... 258.63 16 Little, McDonald & Co. Electric light sundries 72.30 Matthews, Northrup & Co..... Registers for office... 163.00 " Citizens Gas Co......Coke I 2.00 " John A. Miller.... Repairs to wagons... 5.75 " John A. Miller......Repairs to wagons... 9.75 " Fowler & Sons.....Iron..... 11.74 " Charles Schiefer..... Medicine, account of accident 6.30 Barber Asphalt Paving Co... Repair'g asphalt pavements..... 13.42 " 178.50 The Eddy Valve Co...Valves..... 134.00 " The Dold Packing Co..Lard oil..... 27.98 " Farrar & Trefts.....Repairing engines ... 202.57

83	THE BUFFALO CITY WATER WORKS.	
\$ 82.66	Nov. 3, Holly Manufact'g Co Steam chest, etc	
74.28	" Star Oil CoOil	
482.63	Nov. 1, 1890 "Weekly Pay RollWages, regular em- ployes, Dodge Farm	
1,084.98	reservoir, week end- ing Nov. 1, 1890	
-17-2-	Nov. 10, Weekly Pay Roll Wages, laborers, week	
551.36	ending Nov. 8, 1890.	
	" Weekly Pay Roll Wages, regular em- ployes and Dodge Farm Reservoir, week ending Nov. 8,	
1,072.05	1890 "Semi-Monthly Pay Roll.Salaries Commission- ers and regular em- ployes, first half of	
1,367.45	November, 1890 "Semi-Monthly Pay Roll.Regular employes, Dodge F'm reservoir, first half of Nov.,	
62.50	1890	
2,223.73	" O'Brien & ClarkPayment on contract. "Buffalo Natural Gas	
	Fuel Co Gas for fuel, month of	
2,667.57	October, 1890 " Holly Manufact'g CoFinal payment on con-	
8,250.00	" Buffalo Cast Iron Pipe	
	CoPipe and special cast-	
170.74	ings	

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84 TWENTY-SECOND ANNUAL REPORT.

Nov 10	Buffalo Cast Iron Pipe	
1,0,	CoPipe and special cast-	
	ings \$	809.37
ü	Buffalo Cast Iron Pipe	
	CoPipe and special cast-	
	ings	1,505.06
**	Buffalo Cast Iron Pipe	
	Co pipe and special cast-	
	ings	56.02
"	Buffalo Cast Iron Pipe	
	CoPipe and special cast-	
4	ings	540.45
	Buffalo Cast Iron Pipe	
	Co Pipe and special cast-	
4	ings	1,142.30
	Buffalo Cast Iron Pipe	
	CoPipe and special cast-	
N	ings	62.72
Nov. 17,	Buffalo Gas Light Co. Gas bills for October.	61.68
"	M. RiterRepairs to boilers	199.40
••	Farrar & TreftsMaking pipe and ma-	
44	chine work	617.79
"	Star Oil CoOil	59-97
•••	C. J. HamiltonLumber and window	
"	sash	32.04
"	Lockwood & Ough Office sundries	17.40
••	The Barber Asphalt	
	Paving CoRepairs to asphalt	
66	pavements	13.00
•••	The Barber Asphalt	
	Paving CoRepairs to asphalt	
46	pavements	27.03
••	John C. Post Paint, glass, putty, etc.	19.63

	THE BUFFALO CITY WATER WORKS.	85
Nov. 17.	Little, McDonald & Co.Wire and work on	•
	chandelier	5.21
"	B. HammersmithCarrots for horses	19.25
"	Otto UlbrichInk	1.80
"	Hugh McDonaldBlacksmithing	3.20
"	Smith, Falke & Co Meals furnished (test-	
	ing Engine No. 6)	45.00
"	J. J. McWilliams, Ag't. Coal	15.00
"	Fries & CoCorporation cocks, etc	54.61
"	Walbridge & CoStove pipe, etc	7.85
"	G. D. Barr	45.79
**	D. W. Harrington, M.D.Attending employe of	
	Water Department	10.00
"	Goodyear Rubber CoRubber boots and gas-	
	ket	01.8
"	National Meter CoCrown, intermediate	2.50
6.	Weed & CoTape, butts and screws	2.48
	Howard Iron WorksLeather valves	50.00
46	Union Dry Dock CoLumber	2.40
"	Edwards & LeeUse of chronometer	6.00
"	Weekly Pay RollWages, regular em-	
	ployes and Dodge	
	Farm reservoir, week	
	ending Nov. 15, 1890	1,104.48
"	Weekly Pay RollWages, laborers, week	
	ending Nov. 15, 1890.	683.58
Nov. 24,	Weekly Pay RollWages, laborers, week	
	ending Nov. 22, 1890	523.24
44	Weekly Pay RollWages, regular em-	
	ployes and Dodge	
	Farm reservoir, week	
	ending Nov. 22, 1890	1,078.47

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Nov. 24,	Semi-Monthly Pay Roll Salaries Commission-	
	ers and regular em-	
	ployes, last half of	
	November \$	1,430.02
**	Whittet, Barrett & Co. Valves, white waste,	
	etc	13.59
44	Irlbacker & Davis Plumbers' sundries	2.25
**	Hoyt & Loomis Hydrant boxes	230.00
44	J. H. Ruckel & Co, Rubber valves, etc	58.38
a	Hardwicke & Ware	
	Manufacturing CoSoil for plants	1.15
44	Ritzmann, Krause & Co Excavating trenches.	108.02
**	Ritzmann, Krause & Co. Excavating trenches.	81.35
**	Ritzmann, Krause & Co. Excavating trenches.	176.15
**	Ritzmann, Krause & Co. Excavating trenches.	157 75
44	Farrar & Trefts Repairing engines	172.50
**	Holly Mfg. Co Repairing boilers	165.50
**	Jas. D. Warren's Sons Stamped envelopes,	-
	blank books, and	
	printing	118.25
**	Bingham & Taylor Valve boxes and other	
	castings	259.55
**	Howard H. Baker & Co.Sash cord and sundries	2.04
**	French & Kirkholder Brooms	11.50
***	Beals & Brown	7.85
16	The Barber Asphalt	
	Paving CoRepairs to asphalt	
	pavements	18 23
"	The Barber Asphalt	
	Paving Co Repairs to asphalt	
	pavements	9.40
66	D. E. Morgan & Son . Mats and rug	34-75
44	Urban & CoCorn meal and bran	6.15

	THE BUFFALO CITY WATER WORKS.	87
Nov. 23,	N. Moerschfelder Sharpening horse clip-	
	pers \$	2.00
44	Buffalo Refining CoOil	16.45
**	W. H. Walker & Co Hip boots (7 pairs)	27.44
**	Fowler & Sons Hoop iron	5.20
**	W. F. Pratt & Co Oats	135.00
Nov. 29,	Buffalo Gas Light Co., Gas bills for October.	47.28
u	Weekly Pay Roll Wages, regular em-	
	ployes and Dodge	
	Farm reservoir, week	
	ending Nov. 29, 1890	1,054.18
"	Weekly Pay Roll Wages, laborers, also	
	delivery of water	
	bills, week ending	
	Nov. 29, 1890	849.61
Dec. 8,	J. J. McWilliams, Agt. Grate coal	4,450.48
**	Buffalo Natural Gas	
	Fuel CoGas for fuel in Nov	2,470.22
**	M. RiterRepairing boilers	487.85
46	Plumb, Burdict & Bar-	
	nardBolts, nuts, etc	2.13
"	James BolandMason work	126.91
"	James BolandMason work	144.50
**	James BolandMason work	79.00
"	James BolandMason work	47.25
44	James BolandMason work	19.50
"	The Barber Asphalt	100
	Paving CoRepairs to asphalt	
	pavements	18.67
**	The Barber Asphalt	1980
	Paving CoRepairs to asphalt	
	pavements	27.06
	The same of the sa	

Dec. 8,	The Barber Bsphalt	
	Paving CoRepairs to asphalt	
	pavements \$	39 08
"	The Dold Packing Co. Lard oil	51.09
"	Buffalo Gas Light Co Coke and cartage	6 00
**	Enterprise Oil CoLubricating oil	48.00
**	Hall & Sons Fire clay and brick	8.50
**	National Meter CoCrown, intermediate	3.05
46	Whittet, Barrett & Co. Traps, gasket, pack'g,	
	etc	73 55
"	Lockwood & OughOffice sundries	4.25
"	Buffalo Brick Manufac-	
	turers AssociationBrick	17.55
"	F. C. SchottinBinding reports	11 25
**	Louisa BrechtelWashing towels	10.70
"	Howard Iron WorksBolted branches	20.00
44	Matthews, Northrup &	
	Co Printing	4.00
"	Jas. D. Warren's SonsStamped envelopes and	
	printing	35.25
11.	Weekly Pay RollWages, regular em-	
	ployes and Dodge	
	Farm reservoir, week	
	ending Dec. 6, 1890.	1,048.44
-16	Weekly Pay RollWages, laborers and	
	others, week ending	
	Dec. 6, 1890	569.90
**	O'Brien & Clark Payment on contract.	1,359.24
16	Leonard Hettrich, Jr Repairing pavements.	180.36
Dec. 15,	Weekly Pay RollWages, laborers and	
	others, week ending	
	Dec. 13, 1890	585.82

	THE BUFFALO CITY WATER WORKS.	89
Dec. 15	, Weekly Pay RollWages, regular em- ployes, and Dodge Farm reservoir, week	
"	ending Dec. 13, 1890. Semi-Monthly Pay Roll.Salaries of Commissioners and employes	\$ 1,041.08
"	(first half of Dec.) Semî-Monthly Pay Roll.Salaries of employes,	1,367.52
"	Dodge Farm reservoir (first half of Dec.) Buffalo Cast Iron Pipe	62.50
	CoCast iron pipe and specials	1,807.36
44	Buffalo Cast Iron Pipe CoCast iron pipe and	
66	specials Buffalo Cast Iron Pipe CoCast iron pipe and	609.79
66	specials Buffalo Cast Iron Pipe	196.95
66	CoCast iron pipe and specials Buffalo Cast Iron Pipe	370.23
"	CoCast iron pipe and specials	296.50
••	Buffalo Cast Iron Pipe CoCast iron pipe and specials	10.79
Dec. 22,	W. U. Telegraph CoTelegraph and messenger service	2.60
"	The Bell Telephone Co. Telephone service (as per contract)	31.65
"	Becker & WickserHarness repairs and stable supplies	67.70

90 TWENTY-SECOND ANNUAL REPORT OF Dec. 22, Bingham & Taylor.... Valve boxes...... \$ 83.55 Hoyt & Loomis...... Hydrant boxes and covers..... 270,00 46 E. D. Colie Lumber 24.37 ** 7.85 .. Fowler & Sons...... Hardware sundries... 33.05 H. G. Trout Pistons and labor for electric light plant ... 739.86 16 16.23 16 Star Oil Co.....Oil..... 38.32 46 Taylor & Crate Oak lumber 6.93 S. S. Staley Straw 389.10 - 66 J. J. McWilliams, A'gt. Coal 19.50 44 C. J. Heinold......Salt..... 5.40 44 Edward Valentine....Locks for books, etc. 24.85 · cc Times Printing House. Water bills 12.50 14 Weekly Pay Roll Wages, laborers, week ending Dec. 20, 1890 411.94 Weekly Pay Roll Wages, regular employes, week ending Dec. 20, 1890..... 1,104.71 " Semi-Monthly Pay Roll.Salaries, Commissioners and regular employes, last half of December..... 1,430.03 " Weekly Pay Roll Wages, laborers, week ending Dec. 27, 1890. 217.25 Weekly Pay Roll Wages, regular employes, week ending Dec. 27, 1890..... 1,032.90 Weekly Pay Roll Wages, laborers, week ending Jan. 3, 1891... 154.50

THE BUFFALO CITY WATER WORKS. 91
Dec 22, Weekly Pay Roll Wages, regular em-
ployes, week ending
Jan. 3, 1891 \$ 513.32
" Buffalo Natural Gas
Fuel Co Gas for fuel, month of
December 1,547.98
" Buffalo Gas Light Co Gas bills for December 80.64
Mar. 24, Wm. F. Worthington In settlement for in-
jury to Joseph Pietz. 125.00
Nov. 10, Lockwood & OughTo correct error in
paid, Dec. 8, 189025
May 5, G. & T. DarkWork charged Water
Department by City
Engineer 24.50
July 28, Thomas H. MooreWork charged Water
Department by City
Engineer 31.50
May 20, W. E. CowlesExpense of investigat-
ing Water Dep't 125.00
May 20, E. F. BishopExpense of investigat-
ing Water Dep't 68.00
Dec. 31, E. C. Shafer, CompGas bills for Decem-
ber, 1889, and Janu-
ary and February, '90 466.38
" Interest paid by Compt'r 175,054.24
\$ 638,209.76
The total expenditure is subdivided as follows:
Interest on Water Bonds\$175,054.24
Maintenance and Repairs 143,091.79
Improvements and Extension 285,109.04
Dodge Farm Reservoir 34,954.69

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There was added four thousand, one hundred and sixty-two new taps in the mains during the year. This is an increase over the previous year of six hundred and sixty.

The total number of services in the city, January 1st, 1891, is forty thousand, three hundred and thirty-one,

Respectfully submitted,

JOHN T. REES, Registrar.

DISTRIBUTION.

OF THE

WATER DEPARTMENT

FOR THE

YEAR 1890.



FIRE HYDRANTS.

The number of Fire Hydrants placed on new line of mains was 151, of which 80 were on the high service, and 71 on the reservoir supply; also five new hydrants on old line of mains, of which one was on the reservoir supply and four on the high service; also five hydrants abandoned, making the total number of hydrants in the city December 31, 1890, 2,589. Following schedule gives location of hydrants set during 1890:

Location.	System.	Sewered.
Austin street, northwest corner of Pacific street.	R.	P.
Austin street, southwest corner of Clay street	R.	P.
Austin street, southeast corner of Churchill street	R.	P.
Austin street, northwest corner of Joslyn street	R.	P.
Amherst street, opposite Vorhees street	R.	S.
Benzinger street, 500 feet north of Lovejoy	R.	P.
Benzinger street, southwest corner of Vanderbilt		
street	R.	P.
Benzinger street, centre of block, between Van-		
derbilt street and Reiman street	R.	P.
Bush street, centre of block, between Amherst		
street and Grote street	R.	P.
Bush street, end of pipe, southwest corner of		
Grote street	R.	P.
Bailey avenue, 420 feet south of Walden avenue.	H.	S.
Bailey avenue, 830 feet south of Walden avenue.	H.	S.
Bailey avenue, 1250 feet south of Walden avenue	H.	S.
Bailey avenue, southeast corner of Moeller avenue	H.	P.
Bissell street, southwest corner of McKibben		
street	H.	S.

Location.	System.	Sewered.
Barthel street, centre of block between Walden		
avenue and Genesee street	H.	S.
Bird avenue, southwest corner of Baynes street	H.	S.
Bird avenue, southwest corner of Bessie place	H.	S.
Bird avenue, southwest corner of Carmine Place.	H.	S.
Bird avenue, southwest corner of Richmond		
avenue	H.	S.
Bird avenue, southwest corner of Howard avenue	H.	S.
Bird avenue, southwest corner of Elmwood		
avenue	H.	S.
Bird avenue, southwest corner of Soldiers' place.	H.	S.
Box avenue, southwest corner of East Parade		
avenue	H.	
Box avenue, southwest corner of Kehr street	H.	
Box avenue, at the Belt Line railroad	H.	
Clark street, southeast corner of Grimes street	R.	
Cleveland avenue, 350 feet east of Elmwood		
avenue	H.	
Cleveland avenue, northeast corner of Elmwood		
avenue	H.	
Congress street, northeast corner of Bouck		
avenue	H.	S.
Crescent avenue, northeast corner of Amherst		
street	H.	S.
Doll avenue, 750 feet south of Walden avenue	H.	P.
Doll avenue, 700 feet north of Walden avenue	H.	P.
Doll avenue, 1300 feet north of Walden avenue	H.	P.
Dempster street, centre of block between Bailey		
avenue and Green street	H.	P.
Dempster street, southwest corner of Green street	H.	P.
Delavan avenue, southwest corner of Elmwood		
avenue	H.	

Location.	System.	Sewered.
Evans street, southwest corner of Peacock street	R.	
Evans street, opposite Fly street	R.	
North Elm street, northwest corner of Northamp-		
ton street	-	S.
East street, southwest corner of Garfield street	R.	P.
Fourth street, northeast corner of Carolina street	R.	
Fourth street, northeast corner of Georgia street	R.	
French avenue, southwest corner of East Parade		
avenue	H.	
French avenue, southwest corner of Kehr street.	н.	
French avenue, at the Belt Line railroad	H.	
Grant street, centre of block between Amherst		
street and Military road	R.	S.
Grant street, centre of block between Forest		
avenue and Bradley street	R.	
Grant street, southwest corner of Bradley street.	R.	
Grant street, centre of block between Bradley		
street and Letchworth street	R.	
Grant street, southwest corner of Letchworth		
street	R.	
Grant street, southeast corner of Boyd street	R.	S.
Grote street, end of pipe at railroad	R.	
Grace street, southwest corner of East street	R.	S.
Grace street, opposite Hartman street	R.	S.
Grace street, opposite Thompson street	R.	S.
Goodyear avenue, northwest corner of Walden		
avenue	Н.	S.
Goodyear avenue, southwest corner of McKibben		
street	H.	S.
Goodyear avenue, southwest corner of Harrison		
avenue	H.	
Goodyear avenue, end of pipe at railroad	H.	
•		

Location.	-	stem.	Se	wered.
Hawley street, southwest corner of Bradley street Hawley street, southwest corner of Letchworth	R.			
street	R.			
Kentucky street, southwest corner of Mackinaw				
street	R.			P.
Kentucky street, northwest corner of Sandusky				
street	R.			P.
Kehr street, southwest corner of Urban street		H.		
Koons avenue, southwest corner of McKibben				
street		H.	S.	
Kuempel avenue, northwest corner of Broadway.		H.		
Kuempel avenue, centre of block between Broad-		44		
way and railroad		H.		
Lombard street, centre of block between Broad-	D		0	
way and Lovejoy street	K,	44	-	
Lathrop street, northwest corner of Broadway		п.	S.	
Lathrop street, southwest corner of Stanislaus		H.		
Street		11.		
Lathrop street, centre of block between Stanis-		H.		
laus street and Sycamore street Lathrop street, centre of block between Syca-		п.		
more street and Walden avenue		H.		
Liddell street, opposite Ehle street		H.		
Liddell street, end of pipe at the railroad		H.		
Milburn street, southwest corner of Broadway	R	11.		
Milburn street, southwest corner of Grimes street	R.			
Miller avenue, centre of block between Broadway	14.			
and railroad		H.		
Miller avenue, end of pipe at railroad		H.		
Miller avenue, southwest corner of Sycamore		***		
street		H.		
Miller avenue, end of pipe at railroad		H.		
To be an account to the second		-		

Location.	System.	Sewered.
Minton street, northeast corner of Smith street	R.	
Oakland avenue, northwest corner of Summer		
street	H.	
Oakland avenue, one-third way between Summer		
street and Bryant street	H.	
Oakland avenue, two-thirds way between Summer		
street and Bryant street	H.	
Oak street, northeast corner of Sycamore street.	H.	
Oak street, centre of block between Sycamore		
street and Genesee street	H.	
Orlando street, northwest corner of Elk street	R.	P.
Pearl street, southeast corner of Tupper street	H.	S.
Pearl street, 212 feet south of Tupper street, west		
side of street	H.	S.
Preston street, southwest corner of Arnold street.	H.	P.
Preston street, southwest corner of Boyd street.	H.	P.
Porter street, near Hydraulic street	R.	
Parker avenue, northeast corner of Amherst		
street	H.	S.
Peck avenue, southwest corner of Broadway	R.	
Peck avenue, northwest corner of Ashley street.	R.	
Rosser avenue, southwest corner of Roberts		
avenue	R.	
Rosser avenue, end of pipe:	R.	
Rodney street, northeast corner of Main street	H.	S.
Richmond avenue, east side, near the Circle	H.	P.
Rother avenue, southwest corner of Sycamore		
street	H.	P.
Sycamore street, southwest corner of Ruhland		
avenue	Н.	
Sycamore street, southwest corner of St. Louis		
avenue	H.	
avenue	11.	

Location.	System.	Sewered.
Schiller street, northwest corner of Queens street.	R.	
Schiller street, centre of block between Queens		
street and Ludington street	R.	
Schiller street, centre of block between Lovejoy		
street and Ludington street	R.	
Seneca street, southeast corner of White's Cor-		
ners plank road	R.	P.
Seneca street, south side, 420 feet east of White's		
Corners plank road	R.	P.
Seneca street, north side, 870 feet east of White's		
Corners plank road	R.	P.
Seneca street, south side, 1320 feet east of White's		
Corners plank road	R.	P.
Seneca street, north side, 1770 feet east of White's		
Corners plank road	R.	P.
Seneca street, south side, 2220 feet east of White's		
Corners plank road	R.	P.
Seneca street, northeast corner of Mineral Springs		
road	R.	P.
Seneca street, south side, 300 feet east of Mineral		
Springs road	R.	P.
Seneca street, northwest corner of Elkhardt		
street	R.	P.
Seneca street, northwest corner of Ryan street	R.	P.
Seneca street, northwest corner of Geary street	R.	P.
Seneca street, northwest corner of Weiand street.	R.	P.
Seneca street, northwest corner of Kamper street	R.	P.
Seneca street, northwest corner of Littel street	R.	P.
Seneca street, southwest corner of Cazenover		
street	R.	P.
Seneca street, northwest corner of Buffam street.	R.	P.
Seneca street, southeast corner of Sunset avenue.	R.	P.

Location.	System.	
Seneca street, southwest corner of Hart avenue	R.	P.
Seneca street, northwest corner of street, no		
name, 350 feet east of Hart avenue	R.	P.
Seneca street, northwest corner of street, no		
name, 600 feet east of Hart avenue	R.	P.
Seneca street, southwest corner of Tuniata street	R.	Р.
Seneca street, southwest corner of Sunrise avenue	R.	P.
Seneca street, north side, 200 feet east of Sunrise		
avenue	R.	P.
Southampton street, southwest corner of Michi-		
gan street	H.	
Tonawanda street, near Hamilton street	R.	
Tryon place, southwest corner of Clinton avenue	H.	
Utica street, one-third way between Delaware		
avenue and Elmwood avenue	H.	
Utica street, two-thirds way between Delaware		
avenue and Elmwood avenue	H.	
Vincennes street, southwest corner of Sandusky		
street	R.	
Vincennes street, 300 feet south of Sandusky		
street	R.	
Verplank street, northwest corner of Utica street	Н.	
Verplank street, southwest corner of Ferry street	Н.	
Winslow avenue, northwest corner of Kent street	Н.	S.
Woodlawn avenue, northeast corner of Main		~.
street	H.	P.
Woodlawn avenue, south side, centre of block be-		
tween Main and Michigan streets	Н.	P.
Woodlawn avenue, south side, centre of block be-	11.	4.
tween Michigan and Masten streets	Н.	
Woodlawn avenue, southwest corner of Verplank	11.	
	Н.	
street	n.	

Location.	System.	Sewered.
Woodlawn avenue, south side, centre of block be-	.,	
tween Dupont street and Roeher avenue	Н.	
Woodlawn avenue, southwest corner of Roeher	104	
avenue	H.	
Woodlawn avenue, southwest corner of Wohlers		
avenue	H.	
Woodlawn avenue, south side, 350 feet east of		
Wohlers avenue	H.	
Woodlawn avenue, south side, 375 feet west of		
Humboldt Park road	H.	
Washington street, west side, between Huron		
street and Mohawk street	H.	
Weimart street, 400 feet south of Seneca street	R.	
Weimar street, centre of block between Clinton		
street and Beer street	R.	
Weimar street, northwest corner of Beer street	R.	
Wohlers avenue, southwest corner of Riley street	H.	
	H.	
Youngs avenue, southwest corner of Broadway		
Youngs avenue, southwest corner of Ashley street	H.	
Youngs avenue, opposite Grimes street	H.	
II. due ute est in manieur useur		151
Hydrants set in previous years		2,438
Total		2,589
RECAPITULATION FOR YEAR.		
		Number.
		1
3 foot hydrant		
		4
3 foot hydrant	•	4 125
4 foot hydrants	• • • • • • • • • • • • • • • • • • • •	•

THE BUFFALO CITY WATER WORKS.	103
Old D. & H. hydrants	2
Ludlow hydrants	6
Total	151
FIRE RESERVOIRS.	•
Location.	Number.
Main street, in front of Spaulding's ExchangeH.	1
Main street, in front of Lafayette Park	1
Main street, in front of churches	T
Main street, corner of Exchange	1
Main street, corner of Seneca	I
Main street, corner of Swan	I
Main street, corner of North DivisionS.	1
Main street, corner of Eagle	1
Main street, corner of Genesee	I
Seneca street, corner of Chicago	I
Goodell street, corner of Washington	I
Niagara Square, junction of Genesee and CourtS.	I
Niagara street, corner of Mohawk	1
Eagle street, corner of GeneseeS.	I
Broadway, in front of Arsenal	I
Clinton street, corner of Union	1
Total	16
Those marked "H" have raised valves at curb.	
Those marked "S" have surface valves in streets.	
DRINKING FOUNTAINS.	
Location.	Number.
Delaware avenue, corner of Court	1
Main street, corner of Seneca	I
Main street, corner of Erie	1

•

Location.	Number.
Main street, opposite Court	1
Main street, corner of Huron	- 1
Michigan street, corner of Seneca	1
Michigan street, corner of Genesee	1
*Washington Market	1
Total	8
HORSE FOUNTAINS.	
Location.	Number.
Broadway, in front of Arsenal	1
Elk street, between East and West Market	1
Elk street, front of Atlas Refining Company	1
Elk street, corner of Hamburgh	1
Erie street, between Seneca and Terrace	r
Fillmore avenue and Broadway	1
Forest avenue, opposite No. 54	1
Fillmore avenue, corner of William	1
Genesee street, between Lower and Upper Terrace	1
Genesee street, corner of Ellicott	1
Genesee and Walden avenue	1
High street, corner of Genesee	1
Main street, corner of Ferry	I
Main street, corner of Steele	I
Maryland street, corner of Fifth	I
Niagara and Clinton avenue	1
Niagara street, between Eagle and Franklin	1
Niagara street, corner of Prospect avenue	ı
Niagara street, corner of Amherst, old style	ı
Military road and Austin street	1
Sycomore street, corner of Beckwith	1

Louisiana street, near Perry

THE BUFFALO CITY WATER WORKS.	105
Location.	Number.
Niagara street, corner of Hertel avenue	1
Swan street, at Junction with Seneca	1
West avenue, between York street and Porter, avenue	I
Best street, north side, 100 feet west of Jefferson	1
Clinton street, north side, 100 feet west of Emslie	I
Clinton street, opposite Jones street	1
Fonawanda street, corner of Amherst	1
·	-
Total	20

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There were set in 1890, on new line of mains	 297	valves
and New Valves set in old line of mains	 . 28	valves
Total	 325	valves
3 inch	 	7
4 inch	 	31
6 inch	 	231
ro inch	 	15
12 inch	 	21
16 inch	 	3
20 inch	 	2
24 inch	 	т
36 inch	 	14
Total	 	225

LOCATION OF VALVES SET IN THE YEAR 1890.

Amherst St.

6 in. W. of Grant street, 14 ft. N. 3 ft. E. of hyd. 6 in. To hyd. at the Park for Park Commissioners, 42 ft. N. of hyd.

Auburn Ave.

6 in. W. of Grant street, 12 ft. N. 67 ft. W. of S. W. C.

Allen St.

3 in. At Holloway's Barn, 1 ft. W. 47 ft. S. of hyd.

Austin St.

10 in. At Kail street, 30 ft. S. 6 ft. E. of hyd.
10 in. At Military road. 35 ft. S. 8 ft. E. of N. W. C.

Benzinger St.

6 in. At Lovejoy street, 17 ft. N. 83/4 ft. W. of hyd. 6 in. At Vanderbilt street, 81/2 ft. E. 491/2 ft. N. of hyd. 6 in. At Rieman street, 24 ft. E. 121/2 ft. N. of S. W. C.

Breckenridge St.

1 in. E. of Baynes street, 44 ft. N. 15 ft E. of hyd. on S. W. C. 3 in. W. of Baynes street, 46 1/2 ft. N. 9 ft. E. of hyd. on S. W. C. 4 in. E. of Richmond avenue, 15 ft. S. 17 ft. W. of N. W. C.

Bush St.

6 in. At Amherst street, 7 ft. S. 14 ft. W. of hyd,

Boyd St.

6 in. At Preston street, 211/2 ft. N. 5 ft. W. of hyd. 6 in. At Grant street, 18 ft. N. 15 ft. E. of hyd.

Bailey Ave.

12 in. S. of Walden avenue, 14 ft. N. 57 ft. E. of S. W. C. 12 in. N. of Genesee street, 52 ft. E. 49½ ft. N. of hyd. 12 in. S. of Genesee street, 52 ft. E. 14½ ft. S. of hyd.

Bissell St.

6 in. At Walden avenue, 41 ft. N. 391/2 ft. W. of hyd.

Barthel St.

6 in. At Walden avenue, 14 ft. N. 12 ft. E. of hyd. 6 in. At Genesee street, 3 ft. S. 4 ft. E. of hyd.

Bird Ave.

6 in. E. of Hoyt street, 35 ft. N. of S. E. C.

6 in. W. of Bessie place, 10 ft. N. 2 ft. E. of hyd.

6 in. W. of Elmwood avenue, 91/2 ft. N. 21/2 ft. E. of hyd.

Babcock St.

12 in. N. of Clinton street, 9½ ft. 55. N. of hyd.
12 in S of Howard street, 8½ ft. E. 43½ ft. S. of hyd.
12 in N. of Howard street, 8½ ft. E. 35½ ft. S. of hyd.
12 in. S. of William street, 50½ ft. E. 14 ft. S. of hyd.

Beard Ave.

6 in. W. side of Parker avenue, in line of trees and center of street. 6 in. E. of Starin avenue, 40 feet S. 7 ft. E. of manhole to the sewer.

Best St.

6 in. To drain the 36 in pipe, S. E. C. of Elm street, 30 ft. N. 2 in. E. of S. E. C.

Box Ave.

6 in. E. of Avenue A, 22 ft. N. 7 ft. W. of S. E. C. 6 in. E. of East Parade avenue, 11 ft. N. 32 ft. E. of hyd. 6 in. E. of Kehr street, 11 ft. N. 41 ft. E. of hyd.

Berlin St.

6 in. S of Northampton street, 23 ft. E. of S. W. C. 6 in. N. of Dodge street, 22 E. N. W. C.

Bryant Stret.

6 in. W. of Oakland avenue, 7 ft. N. 69 ft. E. of hyd.

110

Broadway.

to in. W. of 36 in. Pipe in Sherman street, 49 ft. S. 29 ft. W. of N. E. C. to in. E. of 36 in. pipe in Sherman street, 49 ft. S. 18 ft. W. of N. E. C.

Clinton St.

6 in. St. no name, W. J. Coatsworth, 150 ft. E. 12 ft. N. of 3d hyd. W. of Bailey avenue.
6 in. At Montgomery street, 3 ft. N. 3 ft. W. of hyd.

Carroll St.

4 in. At Fowler's building, tot ft. E. 5 ft. S. of hyd. corner of Wells street.

Carlton St.

6 in. At Elm street. 45 ft. N. 25 ft. W. of S. E. C.

Clay St.

6 in. At Austin street, 17 ft. N. 91/2 ft. E. of hyd.

Churchill St.

6 in. S. of Austin street, 3 ft. N. 7 ft. W. of hyd.

Clark St.

6 in At Lovejoy street, 15 ft. E. 16 ft. N. of hyd. on S. W. C. 6 in. At Broadway, 55½ ft. N. 33 ft. W. of S. E. C.

Chippewa St.

- 10 in. E. of Delaware avenue, 30 ft. N. 27 ft. of S. E. C.
- 10 in. W. of Franklin street, 29 ft. N. of S. W. C
- 10 in. W. of Main street, 26 ft. N. 39 ft. E. of S. W. C.
- 10 in E. of Main street, 26 ft. N. 60 ft. E. of S. W. C.
- 10 in. W. of Washington street, 26 ft. N. 16 ft. E. of S. W. C.
- 10 in. E. of Washington street, 26 ft. N. 26 ft. E. of S. W. C.
- 10 in. In Genesee street, 49 ft. E. 30 ft. N. of hyd. on Genesee street.

Clay St.

6 in. At the Military road, 48 ft. N. 5 ft. E. of Hyd.

Cleveland Ave.

- 6 in. At Elmwood avenue, 21/4 ft. N. 21/2 ft. E of hyd.
- 3 in Bet. Delaware avenue and Elmwood avenue, for James Adams. 241 ft. E. of 3d hyd. E. of Elmwood avenue.

Congress St.

- 6 in. N. of Bouck avenue, 10 ft. E. 21 ft. S. of hyd.
- 6 in. S. of Delavan avenue, 11 ft. E. 56 ft. S. of hyd.

Carolina St.

4 in. W. of Fourth street, 38 ft. S, 2 ft. W. of hyd.

Davis Ave.

- 6 in. S. of Oakwood.
- 6 in N. of Oakwood.

Doll Ave.

6 in. S. of Walden avenue, 10½ ft. E. 8 ft. S. of hyd. 6 in. N. of Walden avenue, 42 ft. N. 7 ft. E. of hyd.

De Witt St.

4 in. for the Empire State Wagon Co., 7 ft. N. 7. ft. W. of hyd.

Depew Ave.

6 in. At Main street, 68 ft. N. 10 ft. W. of hyd. 6 in. E. of Starin avenue, 177 ft. N. 7 ft. E. of manhole to the sewer.

Delavan Ave.

6 in. West side of Elmwood avenue, 28 ft N. of S. E. C.

) t.

36 in. At Jefferson street, 19½ ft. E. 23 ft. N. of S. W. C. 36 in. At Jefferson street, to drain into the sewer, 24 ft. E. 26½ ft. N. of S.W. C.

Durrenberger Place.

36 in. In centre of block bet. Best and North streets, 301½ ft. S. 26½ ft. W. of S. E. C. of Best street.

6 in. In centre of block bet. Best and North streets, to drain the 30 in. pipe.

Delaware Ave.

4 in. For Municipal Building, 33 ft. E. 127 ft. S. of S. W. C. of Eagle street.

Exchange St.

4 in. At Rumsey's Building, 29 ft. S. 4 ft. W. of E. line of building.

Evans St.

6 in. E. of Canal street, 15 ft. S. 21 ft. E. of hyd.

North Elm St.

6 in. N. of Northampton, to ft. E. 3 ft. S. of hyd.

Elm St.

- 36 in. N. of Tupper street, 31 ft. W. 5 ft. N. of N. E. C.
- 36 in. S. of Burton alley, 35 ft. E. 40 ft. S. of N. W. C.
- 36 in. S. of Carlton street, 36 ft. W. 3 ft. S. of S. E. C.
- 36 in. S of Goodrich street, 28 ft. W. 2 ft. S. of S. E. C.
- 36 in S of Dodge street, 12 ft. W 4 ft. S. of S. E. C.
- 6 in. N of Tupper street to drain the 36 in. pipe, 28 ft. W 12 ft. N. of N. E C.
- 6 in. S. of Burton alley to drain the 36 in. pipe, 38 ft. E. 33 ft. S. of N. W. C.
- 6 in. S. of Carlton street, to drain the 36 in. pipe, 32 ft. W. 3 ft. N. of S. E. C.
- 6 in. S. of Dodge street, to drain the 36 in. pipe, 23 ft. W. 10 ft. S. of S. E. C.

Elk St.

to in. At Hamburgh street, 11 ft. N. 16 ft. W. of hyd.

10 in. Old Valve at Hamburgh street, 11 ft. N. 51 ft. W. of hyd.

Elmwood Ave.

6 in. N. of Delavan avenue, 38 ft. E. of N. W. C.

East St.

6 in. N. of Grace street, 231/2 ft. E. of N. W. C.

Ellicott St.

6 in. N. of Chippewa street, 22 ft. W. 36 ft. S. of N. E C.

Elmherst Place.

6 in. N. of Bird avenue, 185 ft. W. 19 ft. N. of hyd.

114

Fourth St.

- 6 in S. of Virginia street, 12 ft. S. 2 ft. E. of hyd.
- 6 in. S. of Carolina street, 9 ft. W. 4 S. of hyd. on N. E. C.
- 6 in. N. of Georgia street, 45 ft. S. 7 ft. W. of hyd.
- 4 in. S. of Carolina street, 29 ft. W. 41 ft. S. of hyd.
- 6 in. N. of Maryland street, 51 ft. N. 27 ft. E. of hyd.

Fillmore Ave.

- 6 in, S. of Sycamore street, 61 ft. E. 31 ft. S. of hyd.
- 6 in N. of Broadway, 61 ft. N. 20 ft. W. of building on S. E. C.
- 4 in. N. of North Division street, for ice house, 68 ft. E. 196 N. of hyd.

Fisher St.

6 in. S. of Seneca street, 11 ft. N. 14 ft. E. of S. W. C. 6 in. N. of Elk street, 35 ft. S. 12 ft. E. of N. W. C.

French Ave.

- 16 in. E. of Avenue A, 11 ft. N. 40 ft. W. of S. E. C.
- 16 in. E. of East Parade avenue, 81 ft. N. 30 ft. E. of hyd.
- 16 in. E of Kehr street, 11 ft. N. 42 ft. E. of hyd.
- 6 in. To hyd. at the railroad, 7½ ft. N. of hyd.

Forest Ave.

12 in. At Hawley street, 11 ft. N. 2 ft. W. of hyd.

Georgia St.

- 6 in. At Fourth street.
- 6 in. E. of the bridge, 3 ft. E. of the box over the pipe.
- 6 in. W. of the bridge, 2 ft. S. of box over the pipe.
- 6 in. At the round house.
- 6 in. For stand pipe at the round house.

Grant St.

- 10 in N. of Amherst street, 41 ft. W. 1 ft. N. of N. E. C.
- 10 in. S. of the Military Road, 40 ft. N. W. 9 ft. N. of hyd.
- 6 in N. ot Breckenridge street, 10 ft N. 10 ft. W. of hyd.
- 6 in. N. of Forest avenue, 24 ft. N. 40 ft. W. of hyd.

Gurnsey St.

6 in. N. of Austin street, 14 ft. N. 86 ft. E. of hyd. S. E. C. of Hoffman Alley. 6 in. S. of Farmer street, 4 ft N. 20 ft. E. of hyd.

Grote St.

4 in. E. of Bridgeman street, 11 ft. N. 14 ft. L. of hyd.

Grace St.

- 6 in. E. of Niagara street, 101/2 ft. N. 9 ft. W. of hyd.
- 6 in. E. of East street, 9 ft. N. 30 ft. E. of hyd.

Goodyear Ave.

6 in. N. of Walden avenue, 8 ft. E. 13 ft S. of hyd.

116

Glor St.

6 in. At Austin street, (north side), 28 ft. N. 125 ft. E. of hyd. cor. of Clay street. 6 in. S. of Austin street, 15½ ft. N. 11 ft. E. of hyd.

Hoffman Alley.

3 in. At Austin street, 81/2 ft. W. of hyd. 3 in. At Hamilton street, 25 ft. S. 6 ft. W. of N. E. C.

Hawley St.

6 in. At Forest avenue, 14 ft. N. of hyd. 6 in. N. of Bradley street, 61 ft. N. 11 ft. E. of hyd.

Huron St.

12 in. At Oak street, 28 ft. N. 38 ft. E. of S. W. C.
3 in. W. of Main street, for O'Day's Building, 113 ft. W. 27 ft. N. of N. W.
C. of building.

Hollister St.

6 in. To hyd. corner of Spring street, 8 ft. S. 5 ft. W. of hyd.

Joslyn St.

6 in. At Austin street, 34 ft. S. 13 ft. E. of hyd.

Jefferson St.

4 in. At No. 718, planing mill, 26 ft. E. 3 ft. N. of south line of building.

Kentucky St.

6 in. S. of Mackinaw street, 81/2 ft. E. 19 ft. N. of hyd.

Kehr St.

- 6 in. N. of Fougeron street, 201/2 ft. N. 81/2 ft. E. of hyd.
- 6 in. N. of French avenue, 71/2 ft. E. 121/2 ft. N. of hyd.
- 6 in. S. of French avenue, 7½ ft. E. 6½ ft. N. of hyd.

Koons Ave.

6 in. N. of Walden avenue, 41 ft. N. 94 ft. W. of hyd.

Kuempel Ave.

6 in. N. of Broadway, 12 ft. S. 8 ft. E. of hyd.

Koons Alley.

6 in. At Oak street, 5 ft. N. 21 ft. E. of S. W. C.

Kosciuszko St.

- 6 in. S. of Stanislaus street, 7 ft. E. 18 ft. N. of hyd.
- 6 in. S. of Sycamore street, 24 ft. N. 37 ft. E. of S. W. C.
- 6 in. N. of Sycamore street, 33 ft. N. 37 ft. E. of S. W. C.

Llyod St.

6 in. Lautz Brothers, 17 ft. W. 35 ft. S. of N. W. C. of building

Livingston St.

4 in. At Bouck avenue, 18 ft. N. 11 ft. E. of S. W. C. 6 in. S. of Auburn avenue, 5 ft. S. 20 ft. E. of Hyd.

Lombard St.

6 in. S. of Broadway, 9 ft. E. 19 ft. S. of hyd. 6 in. N. of Lovejoy street, 26 ft. N. 16 ft. E of S. W. C.

Lord St.

6 in. S. of Howard street, 14 ft. E. 2 ft. N. of S. W. C.

Lathrop St.

- 6 in. N. of Broadway, 35 ft. S. 13 ft. E. of N. W. C.
- 6 in. N. of Sycamore street, 30 ft N. 8 ft. E. of hyd.
- 6 in. S. of Walden avenue, 14 ft. N. 12 ft. E. of S. W. C.
- 6 in. S. of Stanislaus street, 8 ft. E. 4 ft. S. of hyd.

Lang's Ice House.

4 in. At Walden avenue, 37 ft. N. 39 ft. W. of hyd.

St. Louis Ave.

6 in N. of Sycamore street, 9½ ft. E. 34 ft. N. of hyd.

Lake View Ave.

4 in. For Cosack & Co., 40 ft. N. 39 ft. W. of hyd.

Linwood Ave.

4 in. At North street, for the church, 176 ft. N. 11 ft. W. of hyd. on North street.

Main St.

4 in. W. side of street, N. of Amherst street, 35 ft. S. 19 ft. E. of N. W. C.

Maryland St.

- 4 in. E. of Prospect avenue, 14 ft. N. 16 ft. W. of hyd.
- 6 in. W. of Whitney Place, 31 ft. N. 14 ft. W. of hyd.
- 6 in. E. of Whitney Place, 31 ft. N. 7 ft. W. of hyd.
- 6 in. W. of Tenth street, 13 ft. S. 15 ft E. of hyd.
- 6 in E. of Niagara street, 13 N. 14 ft. E. of hyd.

Morris Ave.

6 in. At Starin avenue, 41 ft. S. 7 ft. E. of manhole to the sewer.

Milburn St.

6 in. S. of Ashley street, 111/2 ft. E. 15 ft. N. of hyd.

Miller Ave.

- 6 in. S. of Sycamore street, 324 ft. E. 21 ft. N. of hyd. S. W. C. of St. Louis street.
- 20 in. N. of Sycamore street, 336 ft. E. 30 ft. N. of hyd. S. W. C. of St. Louis street.

East Market St.

4 in. S. of Fulton street, 3 ft. N. 291/2 ft. W. of hyd.

Mohawk St.

6 in. For fire reservoir between Niagara street and Morgan street, 26 ft. N. of manhole to reservoir.

Niagara St.

- 4 in. N. of Bird avenue, 10 ft. S. 50 ft. E. of hyd. N. W. C.
- 4 in. S. of Forest avenue.

120

4 in. For the Masonic Hall, 30 ft. E. 28 ft. S. of W. line of building.

Oneida St.

- 6 in. E. of Gilbert street, 13 ft. E. 19 ft. N. of hyd.
- 6 in. W. of Scoville street, 3 ft. E. 22 ft. N. of hyd.

Oakland Ave.

- 6 ft. N. of Summer street, 101/2 ft. S. 1 ft. W. of hyd.
- 6 ft S. of Bryant street, 41/2 ft. N. 66 ft. E. of hyd.

Oak St.

- 12 in. N. of Broadway, 32 ft. E. 2 ft. S. of N. W. C.
- 12 in. N. of Sycamore street, 31 ft. S. 25 ft. W. of N. E. C.
- 12 in. S. of Genesee street, 26 ft. N. 17 ft. W. of S. E. C.
- 6 in. To hydrant N. W. C. of Broadway, 13 ft. E. of hyd.
- 6 in. To hydrant in centre of block between Sycamore street and and Broadway, 11 ft. E. of hyd.
- 6 in. To hydrant N. E. C. of Sycamore street, 10 W. of hyd.
- 6 in. To hydrant in centre of block between Sycamore and Genesee streets, 9 ft. W. of hyd.
- 6 in. To hydrant S. E. C. of Genesee street, 4 ft. W. of hyd.

Orlando St.

6 in. S. of Perry street, 4 ft E. 4 ft. N. of hyd, 6 in. N. of Elk street, 8 ft. E. 32 S. of hyd.

Pearl St.

12 in. S. of Tupper street, 13 ft. W. 12 ft. N. of hyd. 12 in. N. of Chippewa street, 28 ft. W. of N. E. C. 12 in. S. of Chippewa street, 28 ft. W. 43 ft. S. of N. E. C.

Preston St.

6 in. N. of Ferry street, 7 ft. N. 9 ft. E. of hyd. 6 in. S. of Breckenridge street, 5 ft. N. 25½ ft. E. of hyd. 6 in. N. of Breckenridge street, 48 ft. N. 24 ft. E. of hyd.

Peck Ave.

6 in. S. of Broadway.

Pacific St.

6 in. N. of Austin street, 35 ft. S. of hyd.

Pink St.

6 in. E of Lord street, 5 ft. N. 151/2 ft. W. of hyd.

East Parade Ave.

6 in. S. of French avenue, 8 ft. E. 4 ft. N. of hyd. 6 in. N. of French avenue, 8 ft. E. 11 ft. N. of hyd.

Roberts Ave.

6 in. S. of Clinton street, 6 ft. N. 340 ft. E. of hyd. on Clinton street, E. of R. R.

Roesser Ave.

6 in W. of Roberts avenue, 8 ft. N. 5 ft. E. of hyd. 4 in. For the snow pump works, 5 ft. N. 5 ft. W. of hyd.

Rodney St.

6 in. W. of Main street, 17 ft. E. 12 ft. S. of hyd. 6 in. At end of Pipe, 17 ft. S. 543 ft. E. of hyd.

Richmond Ave.

6 in. S. of Summer street, 62 ft. E. 53 ft. S. of hyd.

Rother Ave.

6 in. N. of Stanislaus street, 60½ ft. N. 9½ ft. E. of hyd. 6 in. S. of Sycamore street, 25 ft. N. 21 ft. E. of S. W. C. 6 in. S. of Stanislaus street, 6 ft. E. 12 ft. N. of hyd. 6 in. N. of Sycamore street, 32 ft. N. 21 ft. E. of S. W. C.

Rushland Ave.

6 in. S. of Sycamore street, 12½ ft. E. 23 ft. N. of hyd. 6 in. N. of Sycamore street, 12½ ft. E. 33½ ft. N. of hyd.

Summit Ave.

6 in. At Jewett avenue, 10½ ft. S. 1 ft. E. of manhole to the sewer.

Starin Ave.

6 in. N. of Amherst street, 31/2 ft. E. 51/2 ft. N. of manhole to the sewer.

Sycamore St.

20 in. E of Lathrop street, 23 ft. N. 91 1/2 ft. E. of hyd. S. W. C. of Lathrop street.

Shiller St.

- 6 in. S. of Ludington street, 191/2 ft. E. 121/4 ft. S. of hyd.
- 6 in. N of Ludington street, 191/2 ft. E. 2 ft. S. of hyd.
- 6 in. S. of Lovejoy street, 7 ft. N. 26¾ ft. E. of hyd.

East Summer St.

- 6 in. At Masten street, 19 ft. N. 5 ft. W. of S. W. C.
- 6 in. E. of Michigan street, 19 ft. N. of S. E. C.
- 24 in. At Masten street, 12 ft. S. 44 ft. E. of N. W. C.

Sandusky St.

- 6 in. E. of Louisiana street, 6 ft. W. 11 ft. N. of hyd.
- 6 in E. of Kentucky street, 11 ft. E 20 ft. N. of hyd.
- 6 in E. of Tennessee street, 7 ft. W. 50 ft. S. of hyd.
- 6 in. E. of Vincennes street, 9 ft. E. 22 ft. N of hyd.
- 6 in. E. of Alabama street, 9 ft. w. 50 ft S. of hyd.
- 6 in. W. of Hamburgh street, 8 ft. W. 8 ft. N. of Hyd.
- 6 in. E. of Katharine street, 50 ft. S. 10. E. of hyd.

Swan St.

4 in. For Gies & Co., 35 ft. east and 25 ft. N. of S. E. C. of building.

Seneca St.

- 12 in. E. of the bridge, 20 ft. N. 42 ft. W. of S. W. C. of Whites Corner Plank Road.
- 12 in. E. of 3d hyd E. of bridge, 20 ft. S. 13 ft. E. of hyd-

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12 in. E. of 5th hyd. E. of bridge, 20 ft. S. 127 ft. E. of 5th hyd. E. of bridge.
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- 12 in. At the Mineral Springs Road, 20 ft. S. 18 ft. E. of hyd.
- 12 in. At Mogler street, 20 ft. S. 30 ft. E. of hyd.
- 12 in. At Zittle street, 20 ft. S. 31 ft. E. of hyd.
- 6 in. At Indian Church Road, 20 ft N. 171/2 ft. of hyd.
- 6 in. At Sunrise avenue, 20 ft. S. 13 ft. E. of hyd.
- 6 in. To 1st hyd. E. of bridge, 6 ft. N. of hyd.
- 6 in. To 2d hyd. E, of bridge, 17 ft. S. of hyd.
- 6 in. To 3d hyd. E. of bridge, 17 ft. S. of hyd.
- 6 in. To 4th hyd. E. of bridge, 17 ft. N. of hyd.
- 6 in. To 5th hyd. E. of bridge, 17 ft. S. of hyd.
- 6 in. To 6th hyd. E. of bridge, 17 ft, N. of hyd.
- 6 in. To hyd. corner of Mineral Springs Road, 17 ft. S. of hyd.
- 6 in. To hyd. between Mineral Springs Road and Elkhard street, 17 ft. N. of hyd.
- 6 in. For Elkhard street and hydrant, 17 ft. S. 9 ft. E. of hyd-
- 6 in. For Ryan street and hydrant, 17 ft. S. 9 ft. E. of hyd.
- 6 in. For Geary street and hydrant, 17 ft. S. 9 ft. E. of hyd.
- 6 in. For Mogler street, 24 ft. S. 40 ft. E. of hyd.
- 6 in. For Weyand street and hydrant, 17 ft. S. 9 ft. E. of hyd.
- 6 in. For Weimert street, 28 ft. N. 18 ft. E of hyd.
- 6 in. For Kamper street and hydrant, 12 ft. S. 9 ft. E. of hyd.
- 6 in. For Little street and hydrant, 17 ft. S. 9 ft. E. of hyd.
- 6 in. For hydrant corner Cazenovia street, 17 ft. N. of hyd.
- 6 in. For Buffan street and hydrant, 17 ft. S. 9 ft. E. of hyd.
- 6 in. For Sunset avenue and hydrant, 8 ft. W. 17 N. of hyd.
- 6 in. To hydrant corner of Berrick Alley, 16 ft. S. or hyd.
- 10 in. At Ellicott street, 15 ft. E. 56 ft. N. of hyd.
- 10 in. Old Valve Ellicott street, 15 ft. E. 25 ft. N. of hyd.
- 10 in. Old Valve W. of Michigan street, 16 ft. N. 12 ft. W. of hyd.
- 12 in. Old Valve W. of the bridge over Buffalo Creek, 11 ft. W. 67 ft. S. of hyd.

Seventh St.

4 in. At the Holly House, between 36 in. and 12 in. inside of walk in front of Holly House.

Sherman St.

36 in, S. of Broadway, 25 ft, N. 25 ft, W. of S. E. C. 36 in N. of Broadway, 38 ft, S. 20 ft, W. of N. E. C.

- 6 in. To drain the 36 in. pipe N. of Peckham street, 108 ft. N. 21 ft. of W. N. E. C.
- 6 in. On the old 6 in. pipe on Broadway, 39 ft S. 30 ft. W. of N. E. C.
- 6 in. To drain the 36 in. pipe at Broadway, 10 ft. S. 31 ft. W. of N. E. C.
- 36 in. S. of North street, 81/2 ft. W. 31/2 ft. S. of S. E. C.
- 36 in. S. of Genesee street, 155 ft. S. 371/2 ft. W. of S. E. C. of Genesee street.
- 6 in. To drain the 36 in. at North street, 19 ft. W. 2 ft S. of S. E. C.
- 6 in. To drain the 36 in. at Genesee street, 139 ft. S 29 W. of S. E. C.

Stanislaus St.

- 6 in, E. of Loepere street, 18 ft. N. of. S. E. C.
- 6. in. E. of Sobieski street, 21 ft. N., 39 ft. E. of hyd.
- 6. in. W. of Lathrop street, 16 ft. N. 4 ft. W. of hyd.

Sweet Ave.

- 6 in. S. of Stanislaus street, 7 ft. E. 12 ft. N. of hyd.
- 6 in. S. of Sycamore street, 25 ft. N. 21 ft. E. of S. W. C.
- 6 in. N. of Sycamore street, 34 ft. N. 21 ft. E of S. W. C.

Sobieski St.

6 in S. of Stanislaus street, 7 ft. E. 13 ft. N. of hyd. 6 in. S. of Sycamore street, 35 ft. N. 10 ft. E. of hyd.

Southampton St.

6 in At Ellicott street, 12 ft. N. 12 ft. E. of S. E. C. 6 in At Michigan street, 22 ft. N. 20 ft. E. of S. W. C.

Tonawanda St.

- 6 in. N. of Farmer street, 14 ft N. 23 ft. E. of hyd.
- 6 in. S. of Hertel avenue, 101/2 ft. S. 21 ft. E. of hyd.
- 4 in. S. of Austin street, 51/2 ft. N. 15 ft. E of hyd-
- 4 in. At N. Buffalo Planing Mill, 8 ft. S. 20 ft. W. of E. line of Building

6 in. N. of Delavan avenue, 7

- 6 in. S. of Bird avenue, 16 ft
- 6 in. N. of Bird avenue, 10 ft.
- 6 in. S. of Forest avenue, 17 f

of hyd.

hyd.

hyd.

6 in. W. of Gold street, 81/4 ft.

Verplank St.

- 6 in. S. of Glenwood avenue, 22 ft. N. 16 ft. of S. W. C.
- 6 in. N. of Glenwood avenue, 31 ft. N. 16 ft. L. of S. W. C.
- 6 ft. south of Woodland avenue, 6 ft. N. 21. ft. E. of hyd. S. W. C.
- 6 in N. of Woodland avenue, 141/2 ft. N. 21 ft. E. of hyd. S. W. C.

Vandalia St.

6 in. N. of Sandusky street, 9 ft. W. 5 ft. S. of hyd.

Washington St.

- 6 in. To hyd. between Huron and Mohawk streets, 27 ft. E. of hyd.
- 4 in. At the Jewett Building, 4 ft. S. 38 ft. E. of N. line of Building.
- 4 in. At St. Michaels church, 191 ft. S. 14 ft. E. of 3rd hyd. S. of Tupper St.
- 4 in. between Seneca and Swan streets, for D. C. Beard's Building, 6 ft. N. 12 ft. W. of hyd.
- 4 in. S. of Chippewa street, Schoelkopf's Building, 74 ft. S. 11 ft. E. of hyd. S. W. C.
- 4 in. At Weyand's Brewery, 88 ft. N. 28 ft. E. of Building N. W. C. of Goodell street.

William St.

3 in. For Erie Street Yards E. of Babcock street, 8 ft. N. of W. end of Meter street.

West Ave.

6 in. N. of Forest avenue, 31 ft. N. 23 ft. W. of S. E. C.

Wood Ave.

6 in. At Starin avenue, 41 ft. S. 7 ft. E. of manhole to the sewer.

Wohlers Ave.

- 6 in. N. of Best street, 871/2 ft. E. 36 ft. N. of hyd. S. W. C. of Johnson street.
- 6 in. S. of Dodge street, 231/2 ft. 4 ft. N. of hyd.
- 6 in. N. of Kingsley street, 10 ft. W. 51 ft. N. of hyd.

Woodlawn Ave.

- 6 in. West of Michigan street, 41 ft. S. 4 ft. W. of N. W. C.
- 6 in. E. of Michigan street, 41 ft. S. 26 ft. E. of N. W. C.
- 6 in. W. of Masten street, 11 ft. N. of S. W. C.
- 6 in. E. of Masten street 9 ft. W. 12 ft. N. of S. E. C.
- 6 in. W. of Chester street, 32 ft. N. of S. W. C.
- 6 in E. of Chester street, 32 ft. N. 38 ft. E. of S. W. C.
- 6 in. W. of Waverly street, 33 ft. N. 9 ft. W. of hyd.
- 6 in. E. of Waverly street, 33 ft. N. 38 ft. E. of hyd.
- 6 in. W. of Purdy street, 15 ft. N. 2 ft. E. of hyd.
- 6 in. E. of Purdy street, 15 ft, N. 10 ft, E. of hyd.
- 6 in. W. of Verplank street. 10 ft. N. 8 ft. E. of hyd.
- 6 in. E. of Verplank street, 10 feet N. 57 ft. E. of hyd.
- 6 in. W. of Welker street, 38 ft. N. 11 ft. W. of hyd
- 6 in. E. of Welker street, 38 ft. N. 40 ft. E. of hyd.
- 6 in. E. of Jefferson street, 29 ft. N. 18 ft. E. of hyd.
- 6 in. W. of Dupont street, 15 ft. N. 6 ft. E. of hyd.
- 6 in. E. of Dupont street, 15 ft. N. 13 ft. E. of hyd.
- 6 in. W. of Roehrer avenue, 9 ft. N. 4 ft. E. of hyd.
- 6 in. E. of Roehrer avenue, 9 ft. N. 60 ft. E. of hyd-
- 6 in. W. of Wohlers avenue, 9 ft. N. 5 ft. E. of hyd.
- 6 in. E of Wohlers avenue, 9 ft. N. 47 ft. E. of hyd.
- 6 in. W. of Humboldt Park Road, 13 ft. N. 15 ft. W. of hyd.

Young's Ave.

6 in. S. of Broadway, 14 ft. W. 28 ft. N. of hyd.

Water mains were laid in the following named streets during the year 1890:

the year 1090.			Size	
Name.	From	То	Size of Pipe.	
	The second secon	.Oakwood avenue		
		f Oakwood avenue		
Georgia	Court	.Over the canal		
Elm	Tupper	.Best	.36 "	
Best	Elm	.Tupper	.36 "	
Masten	Best	. Reservoir Inlet	36 "	
Sherman	.Peckham	. North	.36 "	
North	.Sherman	. Durrenberger place.	36 "	
Durrenberger place	. North	. Best	36 "	
Jefferson	.Best	. Dodge	36 "	
Dodge	. Jefferson	. Reservoir Inlet	36 +	
Highland ave., nor	Contract of the Contract of th			
		Ashland avenue	3 4	
Kingsley Street crossings 6 " Delaware avenue In front of Municipal building 6 "				
	CALL OF THE PARTY	.Fly		
		. Roesser		
		.End of street		
		.Military road		
		The second secon		
	The second secon	. Amherst		
		.Letchworth		
The second secon	The second secon	.Walden avenue		
		.Chapin place		
	The state of the s	. Moeller		
	Chief the Architecture of	.Tupper		
The state of the s		.Ellicott		
Babcock	.Clinton	.William	12 "	
Oakwood place	. Main	.Crescent	6 44	

THE BUFFALO CITY WATER WORKS.

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Name	From	То	Size of Pipe.
Livingston	. Bouck avenue	Southerly 230 feet	6 in.
		Belt Line railroad	
		. R. R. tracks, 805 feet	
		Ferry	6 "
		. 180 feet southerly	4 "
		. Humboldt parkway.	6 "
		End of houses, 575 ft.	4 "
		City Line6,	
		Bryant	6 "
		.Putnam	4 11
The second secon		.Urban	6 4
	The state of the s	1339 feet northerly.	6 "
		.Stanislaus	6
	The state of the s	McKibben	6 +
Goodyear avenue.	Walden avenue	McKibben	6 "
		McKibben	6 "
Rodney	Main	Avenue A	6
The Art and the Control of the Contr		. Hydraulic	6 "
Vincennes	. Mackinaw		6 "
Orlando	.Elk	Perry	6 "
Young	.Broadway	.Grimes	6 "
Vanderbilt avenue.	.Gold	.Benzinger	6 "
Bush	.Amherst	.Grote	6 "
Sandusky	. Louisiana	. Hamburgh	6 "
		.Grimes	6 "
Lathrop	.Stanislaus	.Sycamore	6 "
Hoffman	.Austin	. Hamilton	3 "
Oneida	.Gilbert	.Scoville	6 "
Peck avenue	.Broadway	. Ashley	6 "
	<u>-</u>	. Northerly 300 feet	4 "
Cooper	.End of pipe	.Belt Line, 108 feet	6 "
		. Military road	6 "

Name. From To of Pip	
Fillmore avenueNorth DivisionRailroad 6 in	
Wohlers Best Dodge 6 "	
Dempster Bailey avenue Green 6 "	
Goodyear	
Liddle Broadway	
French Avenue A Belt Line 6 "	ı
Box avenue Avenue A Belt Line 6 "	
Weiner	
Fillmore avenueSycamore Broadway 6 "	ı
Barthol Walden avenue Genesee 6 "	
Kuemple Broadway	
Stanislaus Loepere Lathrop 6 "	
FourthNortherly 300 feet . 6 "	
Main 6 "	
Parker avenueAmherstBeard 6 "	ı
Auburn avenue Herkimer 6 "	ı
Cary Delaware avenue Morgan 4 "	
Miller	٤
Lathrop Sycamore Walden avenue 6 "	
Delavan avenue Chapin parkway Elmwood avenue 6 "	6
Elmwood avenueDelavan avenueBidwell parkway 6 "	
Sandusky Katherine Fitzgerald 6 "	
Berlin Dodge 6 "	
Miller Broadway Railroad 6 "	
West avenue Forest avenue Northerly 205 feet 6 "	
Congress Bouck avenue Delavan avenue 6 "	
Breckenridge Baynes	4
Crescent Amherst Russell 6 "	6
Bailey avenue 6 "	4
Wohlers 6 "	
East Garfield 6 "	
Rother avenue Stanislaus Sycamore 6 "	"

TWENTY-SECOND ANNUAL REPORT.

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Name	From	То	Size of Pipe.
Phelps	. Fillmore avenue	. Halburt	. 6 in.
Halburt	Phelps	. Jewett avenue	. 6 "
Oak	Genesee	. Broadway	.12 "
Fisher avenue	Seneca	.Elk	6 "
Breckenridge	Richmond avenue .	. Howard avenue	4 4
Southampton	Ellicott	.Michigan	. 6 "
Weimert	Seneca	. Buffalo River	6 "
Livingston	Bouck avenue	.Auburn avenue	4 "
Niagara	Bird avenue	. Forest avenue	4 "
East Summer		.Michigan	24 "
Seventh	Front avenue	. Massachusetts	4 "

RECAPULATION.

Miles,	Feet.	Miles	Feet.	Miles.	Feet.	
Total length of Pipe laid in 1890		26.	3,190			
Less taken up or abandoned on:						
Babcock st. from Clinton to William st	3,600)				
Chippewa st from Delaware ave. to Ellicott st	1,723	}				
Oak st. from Genesee st. to Broadway	1,419)				
Pearl st. from Tupper to Chippewa st	1,16	5 1	2636	25	554	
Pipe laid in previous years				277	1,877	
Total Pipe in the City December, 31st, 1890.				302	2,431	

REPORT

OF THE

CHIEF ENGINEER

OF

STEAM POWER PUMPING STATIONS

1890.

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·		
,	•	

PUMPING STATION

Buffalo City Water Works.

BUFFALO, JANUARY 1ST, 1891.

To Louis P. Reichert, James Ryan, and S. K. Worthington, Water Commissioners:

GENTLEMAN—Herewith I have the honor to present for your imformation, record of engines and other data in connection with this station.

PATRICK BRENNAN,

Chief Engineer, Steam Power.

PUMPING ENGINES, AND THEIR CAPACITY PER 24 HOURS.

I. Lower House.

Engine	No.	Ι,	Worth	ington, 10,000,000	gallons.
46	• 6	2,	"		"
"	"	3,	"		"
"	"	4,	Gaskil	1,	"
44	"	5,	"	20,000,000	"
"	"	6,	"	20,000,000	"
			II.	Upper House. (Distributing).	
Engine	No	. т,	Holly	Reserve 3,000,000	gallons.
"	"	2,	"	6,000,000	"
Water	Pum	pe	d, 1890		gallons.
46	• •		1 8 89		44
Increas	se, 1	890		888,856,431	"

DAILY SUPPLY.

The average daily supply for the year 1890, was forty-seven illion five hundred and seven thousand one hundred and tnirty-seven gallons.

This is a daily consumption of 186 gallons per capita, 254, 457).

On the following days, greatest and least amounts were pumped:

GREATEST AMOUNT PUMPED.

Friday, March 7th	allons-
Friday, Dec. 26th63,437,780	
Saturday, Dec. 27th	44

LEAST AMOUNT PUMPED,

Sunday, May	11th35,209,200	gallons.
Sunday, May	18th37,310,450	**
Sunday, May	25th37,437,600	44

ENGINE HOUSE FUEL STATEMENT.

RECEIVED.

Coal on hand January 1, 18908,930 tons.		
Coal received 18908,016 "		
Coal expended on engines 1890	16,946 7,164	tons.
Coal for starting ores	9,784 70	"
Coal on hand January 1, 1891 S 26,892.98.	9,714	"
Cost of natural gas for engines 31,413.86.	\$ 58,30	56 84
Cost of coal starting fires, 70 ton at \$3.75\$ 262.50.	4 30,30	.04.
Cost of natural gas for hoisting and gas well		
Coal on hand January 1, 1891, 9,714 tons at \$3.51, \$	34.096.31	•

ENGINE RECORD, 1890.—WORTHINGTON ENGINE NO. 1.

	.adi ,	.edl ,n	Vater, ees.	Time Run.	Run.	Water Pumped.	-esr9 adi	Below Gauge.	auge.	Coal.				Value of	Ē	Thermometer.	ji ji
Date.	Steam	Vacuun	Feed V	Hours.	Min.	Gallons.	Water,	Feet.	ij	Tons.	Lbs.	Ashes.	Duty.	Coel and Gas.	7 A. M.	7 A. M. 3 P. M.	11 P. M.
anuary	45	55	130	63	30	90,821,800	32	17	45	Gas and 96	:	22,286	46,042,168	**	32.23	35.23	32 20
ebruary	45	56	130	443	:	171,650 500		81	9	Gas and 129	90		48,405,000	•	32.10	33 20	32.10
farch	45	56	130	206	•	64,586,700	32	81	11	Gas and 3	Ī				28.27	32.18	30
il	45	26	130	526		183,007,200	32	17	:	Gas.	•	:	Gas.	508.76	27.41	57.11	4
May	45		130	508	3	180,098,800		9	11	:	:	:	:	50n.67	50.17	16.16	49.3
::::	45	es	130	397	* 14	148,271,600	33	17	ī	;	:	:	:	412 19	99	77.1	₹. 90
	*9	56	30	438	Ý	196,346,500	35	17	11	:	:	:	:	545.84	72.15	80.23	74.1
August	45	64	122	475	30	280, 186, 300	32	17	:	:	:	-	•	778.92	66.24	72.19	67.5
eptember.	45	25	130	542	:	204,664,600	33	18	4	;	:	:	:	568.97	57.45	71.16	59.1
October	45	56	30	495	30	188,094,100	35	17	9	:	:	:	•	582.90	50.10	55.15	51.6
November.	45	56	30	585	ċ	224.407,500	35	17	œ	:	:	:	•	623.85	41.27	39.13	41.2
ecemper	4	56	32	191	:	59.151,000	33	17	-	62	1,200	908.9	:	181.55	23.19	32.21	26.1
[otal	:	:	:	5,035		30 1,991,286,600	-:	:	:	258	:	77,113	\$5,712.04	\$5,712.04		:	

ENGINE RECORD, 1890. - WORTHINGTON ENGINE No. 2.

Thermometer	7 A. M. 3 F. M. 11 F. M.	23 35.23	10 33 20	27 32,18	27.41 57.11	50,17 16.16	A	66.10 77.1	66.10 77.1	66.10 77.1 75.15 80.23 66.24 72.19	66.10 77.1 75.15 80.23 66.24 72.19 57.45 71.16	56.10 77.1 75.15 80.23 66.24 72.19 57.45 71.16 50.10 55.15	56.00 75.15 75.15 75.15 75.15 75.15 55.16 30.12 41.27	69 66.00 77.1 66.16 52 66.24 72.19 67.8 23 5745 72.19 67.8 23 5745 72.19 57.16 24 5745 72.10 57.10 25 50.10 57.15 27 57 41.27 28 39 12 41.27 29 23.19 32.2 20.13
	Gas,	- 66					The state of the s	***		:	1	1.	1. :	835. 1,276 1,008 750 1,157 1,221
1	Ashes. Duty	77.866 51,460,332			Ga				2,780 Ga		2,780 Gas	:	: :	1 11
	Lbs.	1.	000	-				1,600	1,600	1,600	1,600			
Coal.	Tons.	592	205	80	Gas.			II	Gas.	Gas.	Gas.	Gas	Gas. : : 2	Gas. : : : 29
Juage.	ľa,	11	11	*	ĸ	4		II	119	19 1	19+1	19+17	19+170	19+1707
Below Guage,	Feet.	19	20	20	20	61	0.	TO	19	19	0 6 6 1	9 6 6 6	0 0 0 0 0	8 5 5 5 5 5 5
Pres-	Water													2 2 2 2 2 2 2 2
Water Pumped.	Gallons	361,991,600	252,748,900	395.236,900	135,722,400	70,484,200	man said man	200.491,900	290.491,900	290.491,900 444 820,200 351,401,000	290.491,900 144 820,200 351,401,000 261,405,300	290.491,900 144 820,200 351,401,000 261,405,300 403,263,000	290.491,900 144 820,200 351,401,000 261,405,300 403,263,000 424,891,500	290.491.990 144 820.200 351.401.000 261.405.300 403.263.000 424.891.500 377,660,800
čun.	Min.	30		:	30	30	30	2			h . : :		4	
Time Run.	Hours,	699	446	519	261	137	AOL	- 55	740	740	740 606 427	740 606 427 664	740 606 427 664 720	740 606 606 720 720
Vate	Feed Deg	134	134	134	130	130	120	200	130	133	133	133	133	133
11 '01	Vacuui	26	56	26	23	25	20	0	2 20	500	8889	20000	222222	26666
di,	masi2	5	45	45	45	45		4	4 4	5 5 5	2 2 2 4	2 4 4 4 4	3 4 4 4 4 4 4	2 4 4 4 4 4 4 4
The state of	Date.	anuary	ebruary	farch	pril	[ay		une	uly	uly	uly	uly	uly ugust eptember october	uly

Average Duty Low Service59.034.390

ENGINE RECORD, 1890.—WORTHINGTON ENGINE No. 3.

	.sql		ater, ces.	Time Run.	kun.	Water Pumped.	-esr9-	Below Guage.	uage.	Coal,				Value of	E	Thermometer.	j.
Date,	Steam,	иппэил	Feed W	Hours.	Min.	Gallons.	TotaW nue	Feet.	4	Tons.	Lbs	Ashes.	Duty.	Coal and Gas.	7 A. M.	3 Р. М.	IX P. M.
anuary	54	1	134	447	20	364,632,700	32	61	6	278	1,000	80,105	504,301.60	\$1,044.38	32.23	35.23	32.26
ebruary	45		134	544		276,144,500	33	20	00	212	8	66,878	515,424.00	20	32.10	32.20	32.10
: q:	45		134	744	:	378,465,900	33	8	2	13	:	2,740	With Gas.			32.18	Š.
L	45		134	687		327,277.490	32	19	01	26	8	8,765	:	984.83		57.11	44.14
	9	-	134	744		247,619,900	65	9	2	01	1,200	3,630	;	1,170.64		16.16	49.3
	9		134	719	,	273,294,500	65	61	s	Gas.	:	:	:	1,289.95		77.1	96.16
	9		134	652	:	293,709,200	65	61	3	67	<u>\$</u>	13,343	:	1,379.27	72.15	80.23	74.13
ugust	59		134	109	:	246,889,400	65	61	4	4	8	16,020	;	1,120.25	66.24	72.19	67.52
eptember .	45		134	322	0	182,480,400	32	8	-	Gas.	:	:	:	540 14	71.16	57.45	59.16
ctober	45	56	130	4	:	2,095,200	:	:	:	:	:	:	:	6.20	41.27	39.12	41.27
November.			:		,	:		:	:	:	:	:	:::::::::::::::::::::::::::::::::::::::	:	50.10	55.15	51.6
December	45	36	130	111		60,586,200	32	19	v	20	&	13 790		2.30 22	32.2	23.19	26.13
Total	1	:	:	5.575	:	2,653,195,390] :	:	:	731	1,800	1,800 205,271	:	\$9,866.38		:	:

Percentage of Ashes13 per cent.

Average Duty Low Service 50,986,280

ENGINE RECORD, 1890.—GASKILL ENGINE NO. 4.

		Time Run. Water Pumped.		Water, Trees,
Min. Gallons. Water	Min. Gallons.	Hours Min. Gallons.	Hours Min. Gallons.	Hours Min. Gallons.
275,885,020 65		646 275,885,020	646 275,885,020	195 646 275,885,020
	316,576,760	670 316,576,760	670 316,576,760	195 670 316,576,760
4	339,941,060	744 339,941,060	744 339,941,060	195 744 339,941,060
	278,742,840	533 278,742,840	278,742,840	533 278,742,840
	****	•	•	•
The second second	****	-	-	-
· ·	***	****		
171,595,880	:	357	165 357	165 357
350,317,940		719	165 719	165 719
350,393.240		740	165 740	165 740
343,908,320	:	703	164 703	703
363,888,180	744 363,888,180	744	164 744	164 744
2,801,249,240		5,856		8.856

Percentage of Ashes..... re per cent.

Average Duty Low Service......79,659,401

ENGINE RECORD, 1890.—GASKILL ENGINE No. 5.

.sqt	edi ,a	Vater, ces.	Time Run.	Run.	Water Pumped.		Below Guage.	Guage.	Coal.				Value of	Ē	Thermometer.	er.
	Vacuun	Feed V	Hours,	Min	Gallons.	TataW rus	Feet.	F.	Tons.	Lbs.	Ashes.	Duty.	Coal and Gas.	7 A. M.	3. K	II P. M.
w	27	120	738	:	377,604.500	9	55	9	298	1,000	92,606	92,558,110	\$1,119.40	32.23	35.23	32.26
vo	27	120	587	30	313,951,655	9	56	1	246	1,400	72,159	93,811,544	925.16	32 10	32.20	32 10
10	27	120	742	30	381,546,000	9	56	'n	304	1,200	87.443	92,547,840	1,142.28	28.27	32.18	30.
10	27	120	720	ş	368,762,750	9	25	IO	285	200	87,605	95,179,056	1,069.13	27.41	57.11	44.14
in	27	120	744		362,088,001	65	56	v	326	200	102,299	82,051,200	1,222.88	50.17	16.16	49.3
10	27	120	552	1	264,714,000	9	24	7	233	800	76.215	82,528,994	875 27	66.10	70.1	16 16
50	27	120	262	***	154,381,700	9	25	2	Nat. Gas, 36	:::	2,235	*********	434.55	72.15	80.23	74.13
10	27	120	146		88,977,630	65	22	60	72	400	22,730	90,448,512	270.38	62 24	72.19	67.13
9	27	120	869	:	362,128,350	9	56	:	324	1,400	91,775	82,112,940	1,217.60	57.45	71.16	59.16
5	27	120	424	:	251,407,000	9	56	3	214	800	68,155	86,887,394	804.02	50.10	55.15	9.15
w	27	120	150	:	96,943,500	9	25	1	81	400	27,260	93,068,976	304.39	39.12	41.27	41.27
n	27	120	738	:	444,770,450	65	36	3	364	900	127,329	89,567,520	1,366.14	23.19	35.2	26.13
	1 :	:	6,410	1:	3,367,275,506	:	:	:	2,787	400	857.711		\$10,751.20	:	:	1

Percentage of Ashes 14 per cent.

ENGINE RECORD, 1890. - WORTHINGTON ENGINE NO. 2.

er.	II P. M.	12.26	32 10	30	44.14	40.3	66.16	74 13	67 52	61.16	61.6	41 27	26.13	1
Thermometer	3 P. M.	35.23	33 20	32.18	57.11	16.16	77.1	80.23	72.10	71.16	54.15	41.27	32.2	1
T	7 A. M.	32.23	32.10	28 27	27.41	50.17	66.10	75.15	66.24	57 45	50.10	30.12	23.19	
Value of Fuel.	Coal and Gas.	\$1,008.75	769 88	1,053.68	389.52	202.20	837.69	1,276.63	1,008.52	750.23	1,157.36	1,221 45	1,237.19	\$10,013.19
1	rous.	51,460,332	48,608,448	****	Gas		********	Gas.				********	***************************************	
Achie	Ashes,	77,866	57,097	16,323	******	Section.	2,780		toward.			4,550	26'065	217,713
	Lbs.	:	009	400		***	1,600	Sar	****			9000	1,200	400
Coal.	Tons.	269	205	80	Gas.		11	Gas.	7	5		12	199	768
nage.	In.	310	H	+	v	4	11	9	1	11	_	Io	2	,
Below Guage.	Feet,	61	20	20	20	61	18	61	61	61	61	61	20	:
Pres-	Water	35	32	33	32	33	32	32	32	33	32	32	35	
Water Pumped.	Gallons	361,991,600	252,748,900	395.236,900	135,722,400	70,484,200	290.491,900	144 820,200	351,401,000	261,405,300	403,263,000	424,891,500	377,660,800	3,770,117,740
Sun.	Min.	30		;	30	30	30		.0.*	11.9	4.0	:	:	1
Time Run.	Hours.	663	446	619	192	137	491	740	909	427	664	720	597	6,369
Water,	Leed Feed	134	134	134	130	130	130	130	133	133	130	130	130	:
edl ,m	Vacuu	56	56	26	25	25	25	25	36	56	56	56	36	
.edl .c	Stean	10	45	45	45	45	45	45	45	44	45	45	45	1
Date		anuary	February	March	April	May	une	(uly	August	September.	October	November.	December.	Total

Coal used for Starting Fires, five tons..... \$18 75 Natural Gas, Hoisting 50.00

Average Duty Low Service......59.034,390

ENGINE RECORD, 1890.—WORTHINGTON ENGINE No. 3.

	, ibs.	adi ,n	Vater, ces.	Time Run.	Kun.	Water Pumped.		Below Guage	Guage.	Coal,		•		Value of	Ĕ 	Thermometer.	ř.
Date.	Steam	Vacuum	Feed W	Hours,	Min	Gallons.	TotaW Tue	Feet. In	a	Tons.	Lbs	Ashes.	Duty.	Coal and Gas.	7 A. M.	7 A. M. 3 P. M.	IR P. M.
anuary	45	26	134	447	20	364,632,700	32	6	6	278	1,000	80,105		\$1,044.38	32.23	35.23	32.26
February.	45	36	134	544	* *	276,144,500	33	8	∞	212	8	66,878	515,424.00			32.20	32.10
March	45	36	134	744	*	378,465,900	33	8	2	13	:	2,740	With Gas.	1,304 36	-	32.18	30
April	45	36	134	687	1	327,277.490	32	19	2	26	, 00,	8,765	:	984.83	-	57.11	44.14
May	65	26	134	744	*	247,619,900	65	6	01	9	1,200	3,630	:	1,170.64		16.16	49.3
une	65	26	134	719		273,294,500	65	61	v	Gas.	:	:	:	1,289.95	16.10	77.1	90.16
uly	65	26	134	652	3	293,709,200	65	19	3	67	8	13,343	:	1,379.27	72.15	80.23	74.13
August	65	26	134	109		246,889,400	65	61	4	4	8	16,020	:	1,120.25		72.19	67.52
September .	45	36	134	322		182,480,400	33	8	-	Gas.	:	:	:	540 14		57.45	59.16
October	45	36	130	4	1	2,095.200	:	:	:	:	:	:	:	6.20	41.27	39.12	41.27
November.								:	:	:	:	:	:	:	50.10	55 15	\$1.6
December	45	56	130	111	:	60,586,200	32	19	5	20	&	13 790		2.30 22	32.2	23.19	26.13
Total	1	:	;	5.575		2,653,195,390	:	:	:	731	1,800	1,800 205,271		\$9,866.38	:	:	

Percentage of Ashes.....13 per cent.

Average Duty Low Service 50,986,280

ENGINE RECORD, 1890.—GASKILL ENGINE NO. 4.

ess.	Time Run.		Water Pumped.		Below Gauge	Gauge	Coal.				Value of	E	Thermometer.	er.
Hours.	-	Min.	Gallons.	TateW ine	Feet.	In.	Tons.	Lbs.	Ashes.	Duty	Coal and Gas	7 A. M.	3 P. M.	II P. M.
946	1	:	275,885,020	65	24	0	246	:	75.634	819,436.80	\$ 922.	1-	35.23	32.26
670		:	316,576,760	65	25	6	274	800	78,464	848,171.54	1,029.02	32.10	32.20	32.10
744	_	7.9	339,941,060	65	25	:	601	100	21,595	813,519.00	1,176.	-	32.18	30,
533	_	-	278.742,840	65	25	9	28	1,600	5,200	838,838.80	816.	-	57.11	44.14
:	-		******				*********					50.17	16 16	49.3
	-	:		:							*******	01.00	77.1	10.10
		**	********		:				*****	*********	********		80.23	74.13
357	_		171,595,880		24	00	Gas.			Gas,	494.20	_	72.19	67.52
917		**	350,317,940		25			*****	*****		1,008.92		71.16	59.16
740	_		360,393,240		25	:	.34		12,475	***	_	_	55.15	9 15
703	-	**	343,908,320	65	24	6	691	1,600	58,455	782,341,56	1,165.15	_	41.27	41.27
744	-	:	363,888,180		56	4	354	200	123,035	67,771.64			32.2	26.13
	1	1		1	1	1			-	-		1	1	1
5,856			2,801,249,240	:	:	:	1,216	300	374,858	***************************************	\$9,050.63	*****	****	*****

Average Duty Low Service.....79,659,401

ENGINE RECORD, 1890.—GASKILL ENGINE No. 5.

1	, sdf ,		vater, rees,	Ime Run.		Water Pumped.	Pres-	Below Guage.	Juage.	Son Con		,		Value of	F 	Thermometer.	ië.
Date.	Steam	Vacuur	Degr	Hours,	Min	Gallons.	TolaW Tue	Feet.	녑	Tons.	1.bs.	Ashes.	Duty.	Coal and Gas.	7 A. M.	3 P. M.	II P. M.
anuary	65	27	120	738	:	377,604.500	65	25	0	298	1,000	93,606	92,558,110	\$1,119.40	32.23	35.23	32.2
February	65	27	120	587	စ္က	313,951,655	65	56	-	246	1.400		93,811,544	925.16		32.20	32 10
March	65	27	130	742	ဇ္တ	381,546,000	65	9	s	305	1,200	87.443	92.547,840	1,142.28		32.18	6
April.	65	27 1	120	720	:	368,762,750	65	22	9	285	8	87,605		1,069.13	27.41	57.11	4.1.
May	65	27	120	44		362,088,001	65	92	v	326	8	102,299		_	50.17	16.16	49.3
lune	9	27	120	552	:	264,714,000	65	7	^		8	76.215	82,528,994	875 27	90.10	70.1	191
[uly	9	27 1	120	262	:	154,381,700	65	35	٠,	Nat. Gas, 36	:	2,235		434.55	72.15	80.23	74.1
August.	65	27	120	146	:	88,977,6.10	65	25	60	72	8	22,730	90,448,512	270.38	62 24	72.19	67.1
September	65	27	120	80	:	362,128,350	65	9	:	324	1,400	91,775	82,112,940	1,217.60	57.45	71.16	59.1
October	9	27	120	424	:	251,407,000	65	98	6	214	8	68,155	86,887,394	804.02	50. IO	55.15	51.6
November.	9	27 1	130	159	:	96,943,500	65	25	۳)	81	8	27,260	93,068,976	304.39	39.12	41.27	41.2
December	65	27	120	738	:	444,770,450	65	92	n	364	8	127,329	89,567,520	1,366.14	23.19	32.2	26.1
Total	:	<u> </u> :	- :	6,410	:	3,367,275,506	:	:	:	2,787	8	400 857,711		\$10,751.20		:	:

Percentage of Ashes 14 per cent.

ENGINE RECORD, 1890.—GASKILL ENGINE NO. 6.

	, lbs.	a, tbs.	Vater, rees,	Time Run.	Run.	Water Pumped.	Pres-	Below Guage.	Juage.	Coal.				Value of Fuel,	T	Thermometer	ter.
Date,	Steam	Vacuun	Feed V	Hours	Min.	Gallons,	Water, sure,	Feet.	In.	Tons.	Lbs.	Ashes.	Duty.	Coal and Natural Gas.	7 V. M	3 P. M.	11 P. M
January February March May June July. September. October November.	* * * * * * * * * * * * * * * * * * * *	66647777966	130 130 130 120 120 120 120 120 120 120 120 120 12	27 629 566 566 573 573 573 574 691	1111111111111	13,374,600 17,741,300 452,165,200 375,700,400 356,155,600 75,719,500 263,015,400 344,030,400	555555555555555555555555555555555555555	. : 0 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	: 40 w000 4 w0 r	Gas 3 292 292 292 271 184	1,600 1,600 1,200 230 400	787 34,225 101,720 101,720 101,328 20,530 60,545 93,250	Gas 98,987,532 90,597,312 90,597,312 93,291,500 99,375,696 82,646,928	\$ 38 92 47 19 1,202.76 862.32 1,074.40 1,098.04 762.21 1,017.01 1,004.11	32.23 32.10 27.41 50.17 60.10 72.15 62.24 57.45 50.10 39.12	35.23 32.20 32.18 32.23 37.11 16.16 77.11 32.23 32.23	33.25 30.26 44.44 16.16
Total		13	1:	:	1	2,756,979,600	1	:	1.	1,394	430	430 479,945		\$7,330.49	1 :	-	1

Percentage of Ashes. 14 per cent.

ENGINE RECORD, 1890.—UPPER HOUSE ENGINE No. 2.

Thermometer,	M. II P. M.		_	_	_			_		91.65 91	_	_		
hermo	3 P. M.	35.23	-	32.18	57.	-	_	_	_	71.16	_	_	32.2	:
H	7 A. M.	32.23	32 10	28.27	27 41	50.17	01 99	77.15	62.24	57.45	50.10	39.12	23.19	
Value of	Coal and Gas.	\$ 574.74	517.64	573.44	364.72	491.99	526.16	524.75	373.72			143.90	591.84	\$4,682.90
	Duty.	Gas.	:	:	*	:	,,		**	,			*	· · · · · · · · · · · · · · · · · · ·
-	Aspes,						******		******			******		
	Lbs.	8	:	:	:::	:	:		:	::			:	::
Coal,	Tons.	Gas.		,	:	:			:	,		9		
auge.	ľp.	-	2	:	**	:		:	V.		;	:	:	:
Below Gauge.	Feet.	1	:		:			:		:			:	:
Pres-	Water, sure,	9	9	9	9	9	3	9	9	4	:	9	9	:
Water Pumped.	Gallons,	132,428,580	119.273,930	132,130,000	89,833,240	121,178,880	129,595,490	129,249,250	92,048,700		***************************************	29,903,440	145,772,500	1,121,414,010
Run.	Min.	I.	1				:	9	;	:	:	30	•	30
Time	Hours.	669	672	744	527	742	720	744	531	:		175	744	6,298
Vater, ces.	Feed V	195	195	195	195	195	195	195	195	2	:	195	195	:
a, Ibs.	Ласинг	36	56	56	56	56	56	36	56	1	:	56	56	:
, lbs.	Steam	70	70	20	20	2	20	20	20	:	**	20	20	:
	Date.	January	February	March	April	May	June	July	August	September.	October	November.	December.	Total

Percentage of Ashes.....



PIPE SCHEDULE

COMPLETE TO

December 31st, 1890.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System. EAST SIDE.

Street.	From	J.	Size of Pipe, Inches.	System.	Location of Pipe.
•	Fillmore ouenie	Will	4	=	acil a jo a sise
Abbot road	Smith	1.350 feet easterly	9 0	2	26 ft. n. of s. line.
Abbot road	Smith	Elk	2	×	s jo
Adams	Eagle	Clinton	9	æ	19 ft. e. of w. line.
Adams	Clinton	William	•	×	Œ.
Adams	William	Brown	8	×	Ţ₩.
Adams	Brown	Genesee	9	æ	e e
Alabama	Seneca	Carroll	4	æ	₩.
Alabama	Mackinaw	Sandusky	•	×	oj e
Alabama	South	Erie R. R	9	×	22 ft. e. of w. line.
Alabama	Perry	Mackinaw	9	×	44 ft. e. of w. line.
Alabama	Perry	Scott	9	æ	23 ft. w. of e. line.
Alvin alley	Urban alley	300 feet easterly	8	Ξ	32 ft. s. of n. line.
Armbruster	Broadway	Railroad	9	~	31 ft. w. of e. line.
Ash	Genesee	Broadway	4	~ (33 ft. w. of e. line.
Ashley	Rohr	Person		~ ;	19 ft. n. of s. line.
Avenue A	Genesee	Ferry	_	I;	20 ft. e. of w. line.
g	Fillmore avenue	Mills	•	Ξį	15 ft. n. of s. line.
Babcock	William	Clinton		2	45 ft. w. of e. line.
Babcock	Elk	Clinton	2	2	45 ft. w of e. line.
Bailey avenue	Genesee	Moeller	12	Ξ	40 ft. e. of w. line.
Bailey avenue	Clinton	William	2	~	38 ft. e. of w. line.
Bailey avenue	William	Walden avenue	12	24	42 ft. e. of w. line.
Baits avenue	Clinton	Erie R. R.	•	~	of e.
Bardoll	Marshal	Kehr	•	Ξ	34 ft. s. of n. line.
Barthol	Walden	Genesee	9	Ξ	19 ft. e. of w. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,	From	Q.	Size of Pipe, Inches.	System,	Location of Pipe.
Beck	Broadway	End of street	9	×	15 ft. e. of w. line.
Beckwith	Adams	Sycamore	9	K	n. of s. l
Bennett	Virginia	Rroadway	0 4	××	30 II. w. of e. line.
Benzinger	Ludington	Reiman	10	2	24 ft. w. of e. line.
Benzinger	Reiman	King	9	R	27 ft. e. of w. li
Serlin	High	Best	9	===	26 ft. e. of w. l
Best	Northampton	Macten	0 9		of fr e of n
Best	lefferson	Grape	4	H	17 ft. n. of s. li
Best	Jefferson	Fox	10	H	24 ft. n. of s. li
Best	Fox	Genesee	80	Н	23 ft. n. of s. li
Best	Elm	Masten	36	R	24 ft. n. of s. li
Bissel.	Walden avenue	McKibbon	0	H	37 ft. w. of e. l
Blossom alley	Huron	Broadway	4	N N	15 fl. e. of w. l
Sond buos	Clinton	Howard	4	×	18 ft. w. of e. l
Bourse	I upper	Virginia	44	10	7 II. e. or w. I
Bowen	Walden august	Sycamore	0 4	41	29 IL. C. OI W. II
Box	Avenue "A"	Belt Line R R	9	===	ft s of n
Brighton avenue.	Broadway	Chatham		R	ft. w. of e.
Brinkman	Walden avenue	Rohr	9	H	39 ft. w. of e. li
Bristol	Spring	Jefferson	9	R	ft, s of n.
Bristol	Emslie	Lord	4	R	ft. s. of n. 1
Bristol	Smith	Raze	9	R	ft. s. of n. 1
Broadway	Lafayette	Ellicott	9	R	ft. s. of n.
Broadway	Ellicott	Pratt	91	R	ft. s. of n. 1
Sroadway	Pratt	Coming	nf.	D	as for a not as 13mm

. line	line	line							line			line	line	line	line	line	line.	line	line	line	line	line	line	line	line	line	line	line	line	line	line	line	line	line
of n.	of s.							of s	of w.		of e.	of n	of n	of n	of s	of s.	of s	of n	of n	of n	of n	of n	of s	o of e	of e	of e	of s	of e	of,w	ofe.	of w	26 ft. n. of s. l	of w	of w
ft. s	ft. n.	ft. n.	ft, n,	ft. n.	ft. W.	it. e.	ft. S.	t. n.	ft. e.	ft. n.	ft. w.	it. s.	ft. S.	ft. S.	ft. n.	ft. n.	ft. n.	ft. S.	ft. S.	ft. S.	ft. s.	ft, S.	ft. n.	ft, w.	ft. w.	ft, w.	ft n.	ft. W.	ft. e.	ft. w.	ft. e.	ft. n.	ft. e.	ft. e.
1 35	200	50	57	20	12	17	11	16	23	33	30	23	24	23	33	33	33	18	18	21	91	32	32	30	20	17	24	30	14	56	41	56	15	91
R	R	K	R	R	R	R	H	H	R	R	R	H	H	H	R	R	R	R	R	×	R	R	H	R	×	R	K	H	R	R	R	H	×	K
10	4	91	12	20	4	9	4	4	4	9	9	9	9	9	9	7	IF	9	4	4	4	4	9	9	9	4	20	9	14	91	16	10	9	9
Fillmore avenue	Smith	Bailey avenue	N. Y. C. R. R	Jefferson	350 feet northerly	Railway	Boston alley	Michigan	Perry	Mill	Sycamore	Mulberry	Lemon	Genesee	Michigan	200 feet west of Chicago	160 feet west of Chicago	Louisiana	Alabama	400 ft. e. of VanRensselaer.	Reservation line	Jefferson	Grey	Broadway	Lovejoy	Swan	Virginia	Puffer	100 feet northerly	Swan	Ohio	Ellicott	Curtiss	Norton
Pratt	Sherman	Fillmore avenue	Bailey avenue	Adams	Sycamore	Clinton	Ellicott	Ralph alley	Scott	Fillmore avenue	Genesee	Main	Mulberry	Lemon	Washington	Michigan	200 feet west of Chicago	Chicago	Louisiana	Heacock	Hydraulic	Heacock	Jefferson	Swan	William	Seneca	Michigan	Glenwood avenue	Seneca	Exchange	Exchange	Main	Broadway	Clinton
Broadway	Broadway	Broadway	Broadway	Brown	Bundy alley	Bushnell	Burton alley	Burton alley		2	Camp	Carlton	Carlton	Carlton	Carroll	Carroll	Carroll.	Carroll	Carroll.	Carroll	Carroll	Carroll	Cayuga	Cedar	Central avenue	Center	Cherry	Chester	Chicago	Chicago	Chicago	Chippewa	Clark	Clemo

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	Street,	ę	Size of Pipe, Inches,	System,	Location of Pipe	of Pipe
Clifford	Smith	Selkirk	9	R	25 ft. n.	of s. line.
Clinton	Main	Madison	36	M	25 ft s. of n. 1	of n. line.
Clinton	Oak	Union	00	2	43 II. S. 0	of n. line.
linton	Union	Emslie	IO	K	24 ft. s. o	of n. li
linton.	Enslie,	Fillmore avenue	0 4	20	24 ft. n.	of s. li
linton	Lewis	Babcock	91	KK	12 ft. n.	of s. li
Clinton	Babcock	South Ogden	91	R	42 ft s. (of n. li
Clinton	South Ogden	City line.	9	R	42 ft. S. C	of n. li
Coit	Howard	Broadway	9	R	32 ft. e. c	of w. li
Columbia	Perry	Elk	9	R	14 ft. w.	ofe. li
Columbia	Ohio	Buffalo river	16	R	14 ft. w.	of e. li
Concord	Curtis	W. S. R. R	9	R	17 ft. n.	of s. li
Cooper	Main	Belt Line	9	H	25 ft. n.	of s. li
urtiss	Broadway	Concord	9	R	22 ft, e. c	of w, li
Sypress	Michigan	Pine	9	R	26 ft. s. c	of n. li
Javey	William	Lovejoy	9	R	41 ft. w. of e. l	of e. line.
Dovie	Cenesee	Tefferen		Q	\$ 26 ft. w.	of e. li
	Ochesee	Jeneracii	+	4	20ft. n.	of s, li
Dempster	Bailey avenue	Greene	9	K	31 ft. s. (of n. line.
Depot	William	North line of lot 58	9	R	28 ft w.	of e. li
Deshler	Broadway	1,100 feet southerly	9	R	37 ft. w.	of e. li
Detroit	William	Broadway	9	H	18 ft. e. c	of w. li
Dingens	Bailey avenue	3.200 feet easterly	IO	R	27 ft. n.	of s. line.
Dodge	Main	Jefferson	9	H	21 ft, n. of s. l	of s. line.
Dodge	Jefferson	300 feet east of Wohlers	9	Н	37 ft. s. c	of n. line.
Dodge	Laffareon	Decervoir Inlet	70	Q	an 60 m	of a State

15 ft. e. of w.	32 ft. w. of e.	21 ft. e. of w.	26 ft. w.	40 ft. n. of s.	24 ft. s. of n.	26 ft s. of n.	24 ft, s of n.	24 ft. w. of e.	24 ft. w. of e.	23 ft, w. of e.	19 ft. w. of e.	10	19 ft. w. of e.	41 ft. s. of n.	12 ft. s. of n.	38 ft. n. of s.	21 ft. n. of s.	40 ft s, of n.	38 ft. s. of n.	40 ft. s. of n.	39 ft. s. of n.	23 ft. e. of w.	15 ft. w. of e.	15 ft. w. of e.	12 ft. w. of e.	14 ft. w. of e.	27 ft. e. of w.	45 ft. w. of e	21 ft. e. of w	25 ft. e. of w.	27 ft. e. of w.	40 ft. w. of e	26 ft, e, of w.	25 ft w. of e.
нн		_		-						_	_			_		_		_	_	_		_	_		_	_	_			_	_	_		-
99	9	4	36	9	9	10	9	24	4	4	9	4	IO	9	22	9	9	4	9	IC	or	IC	7	10	4	IO	0	9	9	9	16	IO	To	36
1,350 feet north	Ferry	Best	Best	Emslie	Smith	Pine	Fillmore avenue	450 feet northerly	Clinton	Perry	Fulton	180 feet southerly	Puerner avenue	Masten	Michigan	Masten	Jefferson	Mississippi	Michigan	Babcock	Seneca	Seneca	550 feet northerly	Inpper	ooo teet southerly	Goodell	Goodrich	Best	Dodge	Northampton	Broadway	Clinton	Genesee	Best
Walden	Utica	High	North	Fine	Bond	Main	Smith	Clinton	William.	Scott	Perry	Fulton	Genesee	Ellicott	Masten	Michigan	Masten	Ohio	Columbia	Michigan	Babcock	Exchange		550 feet north of Chippewa.	Inpper.	1 upper	Coodell	Goodrich	Best	Dodge	Clinton	Seneca	Broadway	Clinton
		place	perger place	****************	************	Eagle		*********	Dennett	Market	Market	Market	rarade	Summer	ımmer		Eaton	Elk	Elk	E.M	Different Commence of the Comm	Filippe	Filiage	Filicott	Filiage	Filiant	Engon	Elicott	Enicott	Filliant	Paris	Fullcout	Fire	

Schedule of Water Pipe laid in the City, giving Location, Sise of Pipe, and on what System.

	From	To	Pipe, Inches,	System.	Location of Pipe.
Elm	Genesee	Tupper	9	2	21 ft.e. of w. line.
Elm	Tupper	High	9	H	of e.
Elm	Swan	Genesee	10	R	25 ft.e. of w. line.
Emslie	Seneca	Broadway	9	8:	of w.
Euclid place	Elk	Prenatt	m =	E a	of S.
Euclid place	Prenatt	Abbott road	4 4	R	8 ft.e. of w. line.
Exchange	Main	Jefferson	20	R	of s.
Exchange	Washington	Michigan	9	R	32 ft. n. of s. lin
Exchange	lefferson	Hearock	12	20	ft. n. of s.
Exchange,	Main	Washington	121	H	52 ft. n. of s. lin
Exchange	Heacock	Smith	12	R	24 ft. n. of s. line.
Exchange	Smith.	Selkirk	9	H	24 ft. n. of s. lin
Fillmore overno	Main	boo teet e. Jefferson	12	H	39 ft. s. of n. lin
Fillmore avenue	Seneca	W. N. Y. & P. K. K	4	2	15 ft.w of e. lin
Fillmore avenue	William	Darkham	IO	X t	18 ft.e. of w. lin
Fillmore avenue	Peckham	Broadway	44	Y O	15 If e of w. line,
Fillmore avenue	Genesee.	Sycamore	91	H	Saft w. of e. line
Fillmore avenue	Sycamore	Broadway	9	R	16 ft. w. of e. line
Fillmore avenue.	Sycamore	Broadway	9	R	16 ft.e. of w. lin
r illmore avenue.	Α		9	H	21 ft w. of e. line.
Classical d	Seneca	Elk	9	R	17 ft e, of w. line.
Transfer and	Male	Sandusky	9	2:	22 ft.w. of e. line,
Folsom	Michigan	ooo teet easterly	4	H	15 ff. n. of s. lin

40 ft. s. of n, line. 20 ft.e. of w. line. 33 ft. s. of n. line. 16 ft.e. of w. line. 23 ft. s. of w. line. 30 ft.e. of w. line. 31 ft.e. of w. line.	32 ft.w. of e. line. 27 ft. s. of n. line. 28 ft.e. of w. line. 18 ft.e. of w. line. 18 ft.e. of w. line. 27 ft.w. of e. line. 32 ft.w. of e. line. 22 ft.w. of e. line.	25 ft. 8. of n. line, 24 ft. n. of s. line, 26 ft. n. of s. line, 20 ft. n. of s. line, 40 ft. s. of n. line, 11 ft. s. of n. line, 35 ft. s. of n. line, 19 ft. s. of n. line,	ft. n. of s. ft. s. of n. ft. w. of e. ft. w. of e. ft. w. of e. ft. w. of e. ft. w. of e.
KHKHHHKH	KKKHKKKKK	KKKKKKKK	RENERHEE
2000000	,000000000	0000000400	6111008000
Avenue A Walden Genesee Masten Masten Norton Norton Norton Coe eet northerly	Howard Norton West Shore R. R North Walden avenue Broadway Eagle 270 feet southerly	Filmore avenue Bailey avenue Sweet City line C	Hamburgh, Fitzgerald Brown, Howard Prime Exchange North Division, Allen
Jefferson Broadway Walden avenue Jefferson Michigan Clinton Cherry	William Clinton Broadway Cherry Broadway Curiss Curiss Clinton South Division	Across Hamburgh Canal. Emslie. Central avenue. Williamsville road. Garfield Broadway Metcalfe.	Louisiana Sidway Eagle Clinton Ohio Prime Exchange North Division Goodell
Landon. Lathrop. Latour. Laurel. Laux. Leans. Leans. Leans. Leans.	Lewis. Lewis. Liddle. Locust. Locust. Locust. Lombard. Lord. Lord. Lord.	Louisiana Lovejoy Lovejoy Lovejoy Lovejoy Ludingron Ludingron Lutheran alley Mackinaw	Mackinaw Mackinaw Madison. Madison. Main. Main. Main. Main.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

olreet,	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
Goodrich.	MainBroadway	Michigan West Shore R. R.	99	HW	40 ft. n of s. line 19 ft.e. of w. line
Gorham	Walden avenue. Elk Chicago	McKibben. Perry Ohio Basin Slin	00	HEE	33 ft.w. of e, line
Grape	Cherry	Virginia	100	E W H	38 ft.w. of e. line
Grape	Virginia	Carlton	999	E N	25 ft.w. of e. lin
Green	Michigan	Beak	0 4	i K	30 ft. n. of s. lin
Grey,	Carlton	High	0 0	H	18 ft.e. of w. line
Guilford	Best	Sycamore	9 9	H	34 ft. w. of e. line.
falbert	Phelps	Jewett	9	H	28 ft.w. of e. lin
Hamburgh		Fulton	9 9 9	20	23 ft.w. of e lin
Hamburgh		South	10	×	23 ft.w. of e. lin
Harwood place	Furdy	Alexander place	4	==	22 ft. n. of s. lin
Hauff	Utica	Glenwood	0 0	EH	14 ft. n. of s. line
Hayward	Elk	Fulton	9	R	23 ft e, of w, lin
Jayward	Fulton	250 feet northerly	9	2	18 ft.w. of e. lin
Heacock	Seneca	Scott	0 4	KK	20 ft.e. of w. line
Heacock	Exchange	Perry	12	R	18 ft w. of e. line
Jerman	Droadway	North	9	×	

· · · · · · · · · · · · · · · · · · ·	South Cedar	Jefferson	. 0 0	Z I	14 ft. n.	of s. line
	Genesee	Sycamore	• •	~	40 ft.e. of w.	of w. liv
	:	North	9	æ	28 ft.w.	of e. line
	:::::::::::::::::::::::::::::::::::::::	Sycamore	9	~ ;	39 ft.e.	of w. line
: : : : : : : : : : : : : : : : : : : :		Belt Line R. R.	91	Ξ	23 ft. n.	of s. li
	:	Louisiana	9	×	36 ft. s.	of n. li
	•	L. S. & M. S. R. R	9	×	24 ft n.	of s. li
		Erie Railway	9	~	27 ft n.	of s. lin
		Hamburgh	9	×	24 ft. n.	of s. li
	Smith	Railroad	9	×	20 ft. n.	of s. line.
	South Michigan	320 feet northerly	91	~	7 ft. w.	of e. line.
	South Michigan	1,760 feet southerly	91	æ	IO ft. w.	of e. line.
	320 ft. n. of S. Michigan	640 feet northerly	0	×	7 ft w.	of e. line.
	Ludington	Lovejoy	9	~	41 ft.w.	of e. line
	Broadway	W. S. R. R.	9	Η	18 ft.e.	of w. line
:	Michigan	Potter	4	×	26 ft. s.	of n. line
	Main	Oak	0	H	61 ft. s.	of n. lin
	Michigan	Jefferson	01	Ξ	39 ft. s.	of n. line
	Jefferson	Best	01	Ξ	26 ft. n.	of s. line
: : : : : : : : : : : : : : : : : : : :	Best	Bailey avenue	0	Ξ	40 ft. s.	of n line
	Michigan	Oak	01	œ	39 ft. s.	of n. line
	Mortimer	Jefferson	4	2	12 ft. n.	of s. line
	Dodge	Northampton	9	Ξ	22 ft.e.	of w. line
German alley	Sycamore	Genesee	4	æ	15 ft.e.	of w. line
• • • • • • • • • • • • • • • • • • • •	Curtiss	Lovejoy	9	æ	15 ft.e.	of w. line.
Gilbert	Clinton	Oneida	9	×	33 ft. w.	of e. line
Sirard place	Humboldt parkway	Avenue A	9	Ξ	26 ft. n.	of s line
3lenwood avenue	Main	Purdy	9	Ξ	37 ft. n.	of s. line
Glenwood avenue	Purdy	Brooklyn	9	H	27 ft. n.	of s. line
Glenwood avenue	Humboldt parkway	250 feet west	9	Ξ	43 ft. s.	of n. line
3old	William	Broadway	9	2	41 ft.w.	of e. li
300dell	Main.	Michigan	12	Ξ	40 ft. s. of n. l	of n. li
	Michigan	Cherry	2	24	26 ft. n.	of s. lin
alley	Tupper	Goodell	4	Ξ	7 ft. e.	of w. li

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street,	From	To	Size of Pipe, Inches.	System,	Location of Pipe.
Hickory	Cherry	Genesee	Io	20	23 ft.e. of w. line.
High	Genesee	Lagie	o o I	KH	of e.
High	Jefferson	Grey	9	H	of s.
Hirschback	Spring	Mortimer	49	2 2	34 ft. s. of n. line.
Hollister	Spring	Mortimer	9	R	n.
Howard	Jefferson	Madison	9	R	of n.
Howard	Monroe	Adams	9	R	ft. n. of s.
Howard	Madison	Monroe	4	R	ft. n. of s.
Howard	Adams	Sherman street	44	20	37 ft. s. of n. line.
Howard	MadisonSherman	Shirmway	30	2 2	
Howard	Smith.	Raze	9	R	of s.
Howard	Shumway	Smith	4	R	-
Howard	Metcalfe	Babcock	12	R	of n.
Howard	Metcalfe	Stetson	4	R	-
	Utica	Ferry	9	H	
Humboldt parkway	Northampton	Kingsley	9	H	to ft.e. of w. line.
Huron	Washington	Oak	4		of S.
Huron	Main,	Oak	36		f n.
Hydraulic	Seneca	Carroll	4		ft, w. of e.
Illinois	Elk	Perry	9		if e.
Illinois	Scott	Perry	9	R	. of e.
Indiana	Perry	Mary	+	R	17 ft.w. of e. line
Indiana	Mary	Ohio	9	R	17 ft w. of e. lin
Tames	Lord	Montgomery	9	R	14 ft. s. of n. line.
	Montgomen	Fillmore overne	-	2	To ft a of m line

F. P. F. P.	12 ft.w. of e. 40 ft.w. of e. 15 ft.w. of e. 21 ft.n. of s. 30 ft.w. of e. 45 ft.w. of e. 39 ft.w. of e. 8 ft.w. of e. 9 ft.w. o	R 19 ft.e. of w. line. R 20 ft.e. of w. line. R 20 ft.e. of w. line. R 40 ft.w. of e. line. H 20 ft.e. of w. line. H 20 ft.e. of w. line. R 17 ft. n. of s. line. R 17 ft. n. of s. line. R 17 ft. n. of s. line. R 17 ft. n. of w. line. R 18 ft.e. of w. line. R 15 ft.e. of w. line. R 15 ft.e. of w. line. R 10 ft.e. of w. line.
t north of George t north of George	Dodge 36 Puffer 16 Main 16 Main 16 Fillmore avenue 4 Best 6 North 6 Clinton 6	425 feet southerly 6 Erie Railway 6 Urban 6 Ottawa 6 Ottawa 6 High 6 High 7 Hornboldt Park 6 McKibben 6 Stanislaus 6 Lovejoy 6 Lovejoy 6 Evering 6 Evering 7 Evering 7 Evering 7 Evering 8 Evering 9
Exchange William Too feet north of George Too feet north of George Sycamore Sycamore Brown Virginia High	Best Ferry Puffer Jefferson Raze. North. Broadway. Lyman Sycamore.	Genesee. Elk. Genesee. St. Clair Mackinaw. Carlton Walden avenue Jefferson Metcalfe Walden avenue Broadway Howard. Broadway Washington
efferson efferson efferson efferson efferson efferson efferson efferson efferson efferson	efferson efferson efferson alley. effry ohnson. Jones Kane	Kane Katherine Kehr Kehr Kehr Kentucky Kentucky Ketthum alley Kieffer Kingsley Kingsley Koons Koons Koons Kosons Kanener Krettner Krettner

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

j.	In the control of the
Location of Pipe.	33 ft. w. of e. 1 26 ft. w. of e. 1 28 ft. e. of w. 1 21 ft. w. of e. 1 22 ft. w. of e. 1 23 ft. w. of e. 1 24 ft. w. of e. 1 25 ft. w. of e. 1 26 ft. w. of e. 1 27 ft. e. of w. 1
Locatio	比比性化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化化
System,	пптинитипиниминитипини
Size of Pipe, Inches.	8 2500 400080 400800000 5 5 5 5 5 5 6 5 6 6 8 9
To	Ferry High. South line of Poorhouse lot. Virginia North Gay Puerner Perry Dodge. Reservoir Puffer. Mortimer Elk William William William William Chicago Genesee Goodell High High High Best Ferry Kestry Genesee Goodell High Kestry Kery Kery Kery
From	Allen North Ferry Cherry Cherry Virginia. William. Genesee Elk Best Best Best Best Best Best Best Best
Street,	Main Main Main Main Maple Maple Mark Mark Marshall Marsen Masten Masten Matcalfe Metcalfe Metcalfe Metcalfe Metcalfe Midmi Midmi Michigan Michigan Michigan Milburn Miller

ft. e. of w. ft. e. of w. ft. w. of e.	22 ft.e. 10 ft. e.	19 ft. w. of e.	19 ft. w. of e.	31 ft. n. 21 ft. e.	32 ft. w. of e.	18 ft, e. of w.	32 ft.w. of e	39 ft.w. of e.	H 43 ft.w. of e. line.	17 ft.e. of w.	35 ft. s. of n.	25 ft s. of n.	39 ft. s. of n.	4 6	61 -	4 8	H 34 ft s. of n. line.
999	9 4	0 4 0	40	99	004	0 69 0	99	94	000	. 0	+00	9	9	0 0	36	9	10
Railroad	Seneca	Selkirk. Elk. Marv	Perry Scott.	Ellicott	Eagle	Clinton Delaware & Lack R. R.			High W. S. R. R	300 feet north	Michigan	Grape	Orange	Herman	Durrenberger	Masten	Avenue A
Broadway	Westcott	Smith Ohio Elk	Mary	Washington Broadway	Clinton	James. Elk	Cherry	Goodell	Carlton Curtiss	Howard	Main Michigan	Rose	Locust	Durrenberger	Sherman	Main	Jefferson
Miller. Mills.	Milton	Mississippi Mississippi	Mississippi Mississippi	Mohr	Montgomery	Montgomery	Mortimer	Mulberry	Mulberry	Newell	North North	North	North	North.	Northampton	Northampton	Northampton

Schedule of Water Pipe laid in the City, giving Loration, Size of Pipe, and on what System.

Street.	From	To.	Size of Pipe, Inches,	System.	Location of Pipe.
North Central avenue	Broadway	End of street.	9	R	16 ft.e. of w. line.
North Elm	Northampton	Riley	9	H	26 ft.e. of w. line
North Division	Michigan	N. Y. C. & H. K. R. R.	2 92	XX	24 ft. n. of s. line,
North Division	Emslie.	Low	9	K	18 ft. n. of s. line
North Division	Michigan,	Jefferson	91	R	36 ft. s. of n. line
North Parade	Avenue "A"	East Parade	4	H	19 ft. s. of n. line.
Norton	Lawis	William	IO	40	35 It.e. of w. line
Norton.	Metcalfe	Tones	0.0	22	
)ak	Broadway	Genesee	12	R	23 ft. e. of w. line
Jak	Genesee	Tupper	4	R	16 ft. e. of w. line
Jak	Genesee	Tupper	12	R	13 ft. w. of e. line.
Jak	Tupper	Goodell	9	H	13 ft. w. of e. line
Jak	Goodell	Virginia	4	H	25 ft. e, of w. line
Jak	Virginia	High	9	H	29 ft. e. of w. line
ABK	North	Best	9	H	15 ft. w. of e. line
Jak	Swan	Broadway	Io	R	26 ft.e. of w. line
0000	Main	Elk	9	R	
7010	Mississippi,	800 feet south of Chicago.	9	R	40 ft. n. of s. line
Juio	Miami	Columbia	9I	R	33 ft. n of s. line
Jaio	Louisiana	125 feet northerly	10	R	37 ft. e. of w. line
Jueida	Emslie,	Smith	9	R	24 ft. n. of s. line
Sheida	Central Railroad,	Fillmore avenue	9	R	44 ft. s. of n. line
Jueida	Gilbert	Baitz	9	K	17 ft. n. of s. line
Prange	Cherry	High	9	H	25 ft.e. of w. line
Trange	High	North	9	H	22 ft. c. of w. line
riando	Senera	Ell.		2	

R 18 ft.e. of w. line.	R 12 ft. e. of w. line.	16 ft. e. of w.	39 ft. w. of e	27 ft.e. of w.	34 ft.w. of e.	40 ft.e. of w.	17 ft e. of w.	33 ft. n. of s.	18 ft. n. of s.	45 ft. n. of s.	12 ft.s. of n	29 ft. n. of s.	23 ft. s. of n.	24 ft. s. of n.	24 ft. s. of n.	21 ft. n. of s.	28 ft. n. of s.		26 ft.w. of e.	21 ft.e. of w.	21 ft e of w.	ro ft. n. of s.	18 ft.e. of w.	32 ft. s. of n.	33 ft. n. of s.	18 ft.e. of w.	37 ft.w. of e.	25 ft e. of w.	27 ft.e. of w.	28 ft.w. of e.	34 ft n. of s.			H 15 ft.e. of w. line.
4 4	9	9	9	9	9	9	9	9	36	9	9	•	12	01	12	9	9	9	4	2	91	9	9	9	9	9	4	9	•	36	•	5	•	•
	:	:	:		:	:	:	:	:	-	:	:	:	:	:	:	:	:	:	:	:	:	-	:	:	:	:	:		:	place	-	:	
350 feet southerly	Prenatt	Seneca	Carlton	High	Best	North	Ashley	Fillmore avenue	Fillmore avenue	Mississippi	Michigan	Heacock.	Erie Railway	Babcock	Erie Railroad	Winona	Halbert	William	Sycamore	North Division	Swan	Montgomery	Lovejoy	Hydraulic	Heacock	Broadway	William	Clinton	Genesee	Broadway	t of Owahn	Belt line	Jefferson	End of street
Elk Hayward	Abbott road	Elk	Cherry	Carlton	North	High	Broadway	Jefferson	Jefferson	Main	Columbia	Marvin	Heacock	Smith	Smith	Gorham	Fillmore avenue,	Eagle	William	Eagle	North Division	Lord	Broadway	Van Rensselaer	Van Rensselaer	William	Clinton	Eagle	William	Sycamore	Euclid place	Avenue "A"	Main	Utica
Orlando	Owahn place	Peabody	Peach.	Peach	Peach	Peach	Peck avenue	Peckham	Peckham	Perry	Perry	Perry	Perry	Perry	Perry	Perry	Phelps	Pine	Pine	Pine	Pine	Pink	Playter	Porter	Porter	Potter	Pratt.	Pratt.	Pratt	Pratt	Prenatt	Puerner	Puffer	Purdy

Street.	Street,	To	Size of Pipe, Inches.	System.	Location of Pipe.
Ralph alleyRannall	Burton alley	Virginia	41	HZ	16 ft.e. of w. line.
Raze	Clinton	James	9	KK	: 0
Raze.	Clinton	Bristol	9	W t	eri.
ed Jacket	Perry	Fulton	0 9	XX	33 ft.w. of e. line.
Red Jacket	Perry	Scott	4	K	
eedpaa	Sycamore	Genesee	9	R	
eed	Broadway	Sycamore	9	2	
Rev	Mortimer	Gold	0 -	* 0	in .
ich.	Genesee	Best	4-9	H	
Riley	Masten	Main	9	H	4
iley	Masten	Jefferson	9	H	in
iley	Jefferson	500 feet easterly	9	H	-
Roberts	Clinton	Roesser	9	R	
Koehrer ave	Best	Northampton	9	H	ai.
Koesser	Koberts	End of street	9	R	vi.
Kodney	Main	Avenue A	9	H	.:
Kohr	Walden avenue	Genesee	9	H	2
Kose	Virginia	Carlton	9	H	3
Kose	Carlton	High	9	H	2
Rose	High	North	4	I	2
Koetzar	Walden avenue	Genesee	9	H	
Kother	Broadway	Sycamore	9	H	4
Sandusky	Louisiana	Hamburg	9	R	38 ft. s. of n. line,
Sandusky	Fitzgerald	Katharine	9	R	uć.
Schiller	Overov	William	-	*	

Scott	Main	Illinois	40 ——	R 34 ft. R 22 ft.	34 ft. n. of s. line. 22 ft. n. of s. line.	
Scott	Michigan	Chicago			n. of s. line	
Scoville	Van Kensselaer	Aoo icet east			n. of s. line e of w. line	
Sears	Peckham	Lovejoy.			e. of w. line	
Selkirk	Seneca	450 feet north of Exchange			e. of w. line	
Selkirk	Elk	Ferry.			e. of w. line	
Serkirk	Mais	Washington			w. or e. line	
Seneca	Louisiana	Fillmore avenue			s. of n. line	
Seneca	Michigan	Louisiana			s of n. line	
Seneca	Michigan	Main			n. of s. line	
Seneca	Fillmore avenue	Elk	01		n. of s. line	
Seneca	Elk.	Indian Church Road			s. of n line	
Seneca	Indian Church road	City line	_		s. of n line	
Seymour	Bond	Lord			s. of n. line	
Seymour	Emslie	:::::::::::::::::::::::::::::::::::::::			n. of s. line	
Seymour	Hagerman	:			s. of n. line	
Sherman	Howard	:			w. of e. line	
Sherman	Howard				e. of w. line	
Sherman.	North	:			e. of w. line	
Shepard	Broadway	:			w. of e. line	
Shumway	William	:	_		w. of e. line	
Shumway	Broadway.	:			w or e. line	
Sid way	FILE	Mackinaw	9 9		e of w. line	٠.
Smith	Abbott road.				w. of e. line	
Smith	Abbott road	St. Stephens place			e. of w. line	
Smith	Elk	:			e. of w. line	
Smith	Howard.				w. of e. line	.•
Smith	Howard	:::::::::::::::::::::::::::::::::::::::			e. of w. line	.•
Smith	Lovejoy				w. of e. line	.•
Smith	Lovejoy	h			w. of e. line	
Smith	Clinton				e. of w. line	
Sobieski	Broadway	Stanislaus	- •	4 17 ft.	e. of w. line	

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	To To	Pipe, Inches.	System	Location of Pipe.
Sommer	Seneca	125 feet southerly	CH	W.	34 ft.e of w. line
South	Louisiana	Ohio	9 9	M M	22 ft, s, of n, line 20 ft, s, of n, line
Southampton		Masten.	9	H	40 ft. s. of n. lin
Southampton		Masten	9	H	39 ft. s. of n. lin
South Division	Seneca	Swan N V C R R	44	××	32 ft, e. of w. lin
South Division		N. Y. C. R. R.	9	K	24 ft. n. of s. lin
South Division		South Cedar	Io	K	24 ft, n. of s. lin
South Division		Pine	9	2	36 ft. n. of s. lin
South Division	Emslie	Lord R R	9 9	××	34 It. s. of n. line.
Pring	Sycamore	Peckham	36	2	27 ft.w. of e. lin
oring.	Cherry.	Genesee	IO	R	25 ft.e. of w. lin
Spring	Genesee	Broadway	4	R	30 ft.e. of w. lin
oring	Broadway	William	00	R	39 ft.w. of e. lin
Spring	William	Clinton	9	R	40 ft.e. of w. lin
Spring	Clinton	Eagle	4	R	25 ft.w. of e. lin
Spruce	Cherry	Broadway	9	R	35 ft w. of e. lin
Stanislaus	Loepere	Lathrop	9	K	19 ft. n of s. lin
Stanton,	Howard	Peckham	9	K	31 ft.w. of e. lin
Stanton	Lovejoy	Broadway	9	R	18 ft.w. of e, lin
Stanton	Peckham	Lovejoy	9	R	34 ft.e. of w. lin
Paul	Main	300 feet easterly	4	H	18 ft. s. of n. lin
St. Paul	Oak	624 feet westerly	9	H	17 ft. s. of n. line
St. Stephen's place	Abbott road	St. Thomas place	9	K	15 ft.e. of w. line
Strauss	Genesec	Sycamore	9	R	20 ft.w. of e. lin
Strauss	Sycamore	Broadway	9	K	22 ft e. of w lie

33 ft. w. of e. line. 22 ft. n. of s. line. 27 ft. s. of n. line. 26 ft. n. of s. line. 39 ft. s. of n. line. 32 ft. w. of e. line. 16 ft.e. of w. line. 25 ft. n. of s. line.	44ft. 8, of n. line. 20ft. n. of s. line. 41 ft. n. of s. line.	42 ft. n. of s. line. 25 ft. s. of n. line. 23 ft. n. of s. line. 20 ft.e. of w. line. 19 ft.e. of w. line.	15 ft.w. of e. line. 32 ft.e. of w. line. 33 ft.w. of e. line. 33 ft.w. of e. line. 24 ft. s. of n. line.	16 ft. n. of s. line. 17 ft. n. of s. line. 25 ft. v. of e. line. 17 ft. v. of e. line. 17 ft. v. of e. line. 26 ft. n. of s. line. 41 ft. s. of n. line. 41 ft. s. of n. line. 22 ft. e. of w. line. 21 ft. v. of e. line. 17 ft. n. of s. line.
HKKKKHKK	K K K K	RXXXXX	KKKKKI	HRRHHHRRH
3000000000	4 40	000000	200000	00440000400
Rohr Jefferson Ellicott Cedar Seneca Genesee West Shore R. R.	Jefferson Beckwith Johnson	Sherman Fillmore avenue Miller Erie Railroad Tecumseh Harrison	William. Metcaife William. Broadway Railroad.	Michigan Michigan Champlin Clinton William Villiam Jefferson Dupont Humboldt parkway Railroad. Sandusky
Walden avenue Spring. Main. Ellicott Cedar Best. Stanislaus.	Spring	Johnson. Sherman. Fillmore avenue. South Mackinaw. Broadway.	Howard Howard Lovejoy Seneca Main	Main. Washington Sycamore Eagle. Clinton Main. Defferson Dupont Mackinaw
Sumner avenue. Superior. Swan. Swan. Swan. Sweet avenue. Sycamore.	Sycamore	Sycamore Sycamore Sycamore Tenessee Tenessee Tius avenue	Thomas Thomas Townsend Townsend Troupe	Tupper Tupper Tupper Tupper Tupper Tupper Union Union Utica Utica Utica Vandalia Vandalia

Street,	From	To	Size of Piper Inches.	System.	Location of Pipe,
Van Rensselaer	Seneca	Porter	40	22	20 ft.w. of e. line.
Vary	Spring	Jefferson	0 4	2	21 ft. s. of n. lin
Verplanck	Utica	Ferry	9 9	HE	19 ft.w. of e. lin 25 ft. e. of w. lin
Vincennes	South	245 feet northerly	9	K	25 ft. e. of w. lin
Vine	Elm	Oak	0	2	28 ft. n. of s. line.
Virginia	Main	Cherry	20	R	23 ft. n. of s. lin
Virginia	Cherry	Rose	9	R	4 ft. n. of s. lin
alden avenue	Best	Williamsville road	IO	H	24 ft. n. of s. lin
Walden avenue	Bailey avenue	780 feet west of City line	10	H	11 ft. s, of n. lin
Walden avenue	End of 10-inch pipe	559 feet easterly	9	Ho	II It, S. of n. lin
Washington	Exchange	Tupper	12	H	41 ft.e. of w. lin
Washington,	Ohio	Exchange	10	R	26 ft e. of w. lin
Washington	Exchange	Ohio	12	R	41 ft.e. of w, lin
Washington	Exchange	Genesee	9	R	38 ft e, of w. lin
ashington	Tupper	500 feet southerly	9	R	23 ft.w. of e. lin
Washington	Tupper	350 feet northerly	9	R	39 ft.w. of e. line.
Washington	Virginia	High	9	H	38 ft.w. of e. lin
Washington	Tupper	Virginia	12	H	42 ft, w. of e. lin
Nasmuth	Walden avenue	Genesee	9	H	14 ft.e. of w. lin
Walter	Elk	Perry	9	R	25 ft.w. of e. lin
Walter	Perry	Seneca	9	R	33 ft w. of e. lin
Watson	Clinton	Broadway	9	K	18 ft.e. of w. line.
Waverly	Glenwood avenue	Puffer	9	Η	28 ft.e. of w. line

15 ft.e. of w. 18 ft.e. of w. 15 ft.e. of w. 27 ft.e. of w. 20 ft.e. of w.	4 6 ft.e. of w. line. 27 ft. s of n. line. 39 ft. n. of s. line. 42 ft. s. of n. line. 30 ft. s. of n. line. 40 ft. s. of n. line. 23 ft. s of n. line.	R 23 ft. s. of n. line. R 15 ft e of w. line. Z 26 ft. e. of w. line. R 17 ft. e. of w. line. H 21 ft. s. of n. line. H 22 ft. n. of s. line. H 22 ft. n. of s. line. R 17 ft. e. of w. line.
0 0 4 0 4 4 0 ——————————————————————————	400000000	
Buffalo River. Glenwood Ferry Exchange William 300 feet southerly.	p	City line. Genesee. William Railroad Perry. Humboldt parkway. Northampton Riley Humboldt parkway.
Clinton	Best Michigan Pratt Pratt Jefferson Emslie Adams N. Y. C. R. R. North Ogden	South Ogden Sycamore Sycamore Broadway Elk Main Main Mestrick Kingsley Avenue A Broadway
Weimert Weimert Welker Welker Welser West Bennet. West Parade avenue	West Parade avenue William William William William William William William	William Wilson Wilson Wilson Winslow avenue Winona avenue Woodlawn avenue Woehlers avenue Woeppel avenue

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System. WEST SIDE.

Street,	From	То	Size of Pipe, Inches.	System.	Location of Pipe.
Albany.	Niagara	West avenue	9	K	40 ft. n. of s. line
Allen	West avenue	Wadsworth	24 0	HE	24 ft. n. of s. line. 50 ft. n of s. line.
Amherst	Main	Colvin	122	Ha	28 ft. n of s. line.
Amherst	Military road	N. Y. C. R. R.	9	K	22 ft. s. of n. line
Anderson place	Richmond avenue	Ashland avenue	9	Ξ:	38 ft. s. of n. line
Annie place	Ashland avenue	Elimwood avenue	9 9	HE	40 ft. s. of n. line.
Annie place	Grant	Tryon	9	H	17 ft. n. of s. line
Arkansas	West avenue	Herkimer	9	H	22 ft. n. of s. line
Arkansas	Herkimer	Grant	9	Н	44 ft. s. of n. line
Arlington place	North	Park	9	H	3 ft. w. of e. line
Ashland avenue	Bryant	Summer	9	H	40 ft, w. of e. line
Auburn avenue	West avenue	Niagara	0 4	IZ	25 ft. e. of w. line
Auburn avenue	Herkimer	535 feet east	19	H	10 ft. n. of s. line
Auburn avenue	Grant	Elmwood avenue	9	H	24 ft, n, of s, line
Austin	Niagara	Military road	Io	R	40 ft. s of n. line.
Austin	Niagara	Bridge	64	R	
Balcom	Main	Michigan	9	H	4r ft. n. of s. line
Balcom	Michigan	Linwood avenue	9	Н	24 ft. s. of n line
Barker	Main	75 feet westerly	4	H	13 ft. n. of s. line.
Barton	Breckenridge	120 feet southerly	CH	R	5 ft.w. of e. line
Barton	Arkansas	California	9	H	27 ft. e. of w. line
Baynes	Ferry	Bouck avenue	9	Ξ	22 ft.e. of w. line

5 ft.e. of w. 25 ft. n. of s. 23 ft. n. of s. 23 ft. n. of s. 43 ft. s. of n. 38 ft. n. of s. 45 ft. s. of n. 45 ft. s. of n.	########### 8 % 9 G 8 8 9 G 8	12 [1. S. Ol n. 12 [1. S. Ol n. 12 [1. S. Ol n. 12 [1. W. Of e. 25 [1. W. Of e. 25 [1. W. Of e. 12 [1. N. Ol n. 13 [1. n. of s. 34 [1. W. Of e. 34 [1. W. Of e	H 29 ft. s. of n line, R 17 ft. s. of s. line, R 39 ft. s. of n. line, R 35 ft. s. of n. line, R 24 ft. n. of s. line,
170 feet southerly 6 Parker 6 Hoyt 6 Chapin place 6 West 6 DeWitt 6 Herkiner 12 Main 6 Main 6	Preston 6	150 feet westerly 3 Webster 6 Rhode Island 6 Chandler 6 Howard avenue 6 250 fit west of Ashland ave 6 Howard avenue 6 Grote 6 Grote 6 Grote 6	Delaware avenue 6 Herkimer 6 Commercial 6 foo feet easterly 4 Sixth. 4 Niagara. 6 Tupper 6
Huron Starin. West avenue. Hoyt Niagara. Niagara. Herkimer. DeWitt.	Grant. Vermont. Rhode Island. Niagara. Niagara. West avenue. DeWitt. Barton. Herkimer.	Linwood avenue Eichmond Vermont Amherst Linwood avenue Elmwood avenue Richmond avenue Richmond avenue	Kichmond avenue. West avenue. Erie. Lloyd. Eric canal. Sixth.
Bean alley. Beard. Bird avenue. Bird avenue. Bird avenue. Bouck avenue. Bouck avenue. Bouck avenue.	Boyd Brayton Brayton Brayton Breckenridge Breckenridge Breckenridge Breckenridge Breckenridge	Breckenridge. Breckenridge. Breckenridge. Bremen Bridgeman Bryant, S. S. Bryant, N. S.	Butler California Canal Carolina Carolina

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on

Street,	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
Carolina	Niagara	Prospect avenue	9	20	35 ft. s. of n. line.
Chapin parkway	Clinton avenue	Delavan avenue	20.	H	6 ft.w. of e. line.
Chapin parkway	Soldiers' place	Delavan avenue	9	Z	II ft. e. of w. line.
Chippewa	Delaware avenue	Georgia	00	R	31 ft. n. of s. line.
Chippewa	Main	Delaware avenue	IO	H	31 ft. n. of s. line.
Church	Pearl	Terrace	IO	2	70 ft. s. of n. lin
Churchill	Amberst	Jackson	0 4	××	18 ft w of e line.
Clay	Austin	Military road	9	H	36 ft, w. of e. line.
Cleveland avenue	Delaware avenue	Elmwood avenue	9	Н	16 ft, s, of n, line.
Cleveland	Ferry	Breckenridge	9	H	20 ft. e. of w. line.
Clifton place	Cottage	Norris place	4	H	16 ft, w. of e. line,
Clinton avenue	Niagara	West avenue	9	K	24 ft s. of n. lin
Clinton avenue	West avenue	Herkimer	9	×	23 ft. s. of n. line.
Clinton avenue	Richmond avenue	Chapin Parkway	200		of n
Clinton avenue	Chapin parkway	500 feet easterly.	9	H	40 ft. s. of n. line.
College	Cottage	North	9	H	of w.
Commercial	Terrace	Water	9	R	f w.
Congress	Clinton avenue	Bouck avenue	9	H	of w.
Connecticut	Niagara	Prospect avenue	20.	H	of s.
Connecticut	Prospect avenue	Fargo avenue	7	H	15 ft. s. of n. line.
Connecticut,	Fargo avenue,	West avenue	9	H	of n.
Connecticut	West avenue	Plymouth avenue	91	H	of s.
Connecticut	Plymouth avenue	Richmond avenue	9	H	of n.
Cottage	Mariner.	Hudson	IO	H	30 ft. n. of s. line

Court.	Main	Terrace	36	2	1 30 ft. 1	n. of s	line	
Court	Main	Pearl	٥	Ξ	52 ft 1	a Jo	- Line	
Court	Morgan	Terrace	9	2	35 ft. n. of s. 1	n. of s	line	
Court	Wilkeson	Georgia	4	2	43 ft. 1	a. of s	line.	_
Crescent avenue	Jewett avenue	End of street	9	Η	23 ft. e	e of w	line.	_
Crescent avenue	Amherst	Russell	9	Ή	24 ft. e	of w	line.	
Danforth	Forest avenue	Bradley	9	~	38 ft. c	. of w	. line.	
Dart	Forest avenue	Bradley	4	æ	25 ft. e	. of w	line.	
Davis avenue	Oakwood	275 feet north	9	Η	32 ft. W	7. of e.	line.	
Davis avenue	Oakwood	275 feet south	9	H	32 ft. v	w. of e	line.	
Dayton	Main	Prime	4	2	39 ft 1	a. of s	line.	_
Dearborn.	Amherst	350 feet northerly	9	~	25 ft. e	. of w	line.	
Dearborn	Parish	Hertel avenue	9	×	40 ft.w	7. of e.	line.	
Delavan avenue	Grant	Tryon place	9	×	41 ft. s	of n.	line.	
Delavan avenue	Chapin parkway	Elmwood	9	Ξ	22 ft. 1	a. of s.	line.	_
Delavan avenue	Chapin parkway	300 feet easterly	4	~	20 ft. s	of n	line.	
Delavan avenue	Chapin parkway	Linwood avenue	ล	H	22 ft. r	ı. of s.	line.	
Delavan avenue	Linwood avenue	Main	91	Η	24 ft. r	a of s.	line.	
Delavan avenue	Niagara	West avenue	9	×	33 ft. s	of n.	line.	
Delavan avenue	West avenue	Congress	9	24	12 ft. s	. of n.	line.	
Delavan avenue	Chapin parkway	150 feet westerly	9	Η	25 ft. r	n. of s.	line.	
Delaware avenue	Church	Niagara	∞	צ	38 ft. e	. of w	line.	
Delaware avenue	Niagara	Chippewa	01	×	58 ft. e	. of w.	line.	
Delaware avenue	Chippewa	Virginia	01	Η	58 ft.e.	of w.	line.	
Delaware avenue	Virginia		9	Η	41 ft.w	. of e.	line.	
Delaware avenue	North		12	Ξ	36 ft.w	. of e	line.	
Delaware avenue	585 feet north of Ferry.	775 feet north of Ferry	2	H	14 ft. w	7. of e.	line.	
Delaware avenue	775 feet north of Ferry	Chapin place	9	Ξ	16 ft. v	v. of e	line.	_
Delaware place	Delaware avenue	Virginia	4	Ξ	19 ft. r	s jo .ı	line.	
Depew avenue	Starin	Main	9	H	45 ft s	of n.	line.	
Dewitt	Breckenridge	Bouck avenue	4	~	43 ft.w. of e.	7. of e.	line.	
Dewitt	Bouck avenue	Forest avenue	9	×	24 ft.e.	of w.	line.	
Dewitt	Forest avenue	Bradley	4	×	19 ft.w	. of e.	line.	
Eagle	Main	Pearl	9	H	25 ft. n. of	л. of s.	. line.	
Eagle.	Franklin	Terrace	•	×	26 ft. s	. of n.	line.	
Eagle.	Main	Pearl	- 2	×	30 ft. 1	n. of s.	line.	

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Eastle Pearl Parish Farmer East Garfield Virginia Garfield Virginia Garfield Carolina Maryland Carolina Maryland Carolina Maryland Connecticut Rhode Island Massachusetts North Massachusetts North Elmwood avenue Lexington Ferry Clinton Assachusetts Canno avenue Carington Ferry Clinton Assachusetts Clinton Clinton Clinton Clinton Clinton Clinton Clinton Clinton Main Ferre Main Erie Main Ferre Main Essex Canal Can	Franklin Farmer Hertel avenue Grace 220 ft. e. of Delaware ave. Carolina Maryland Hudson. Vermont Massachusetts Hampshire	0000 40 400	пикиники	25 ft. n. of s. line. 39 ft.e. of w. line. 39 ft.e. of w. line. 39 ft. n. of s. line. 38 ft. n. of s. line. 19 ft. e. of w. line. 132 ft. w. of e. line. 32 ft. w. of e. line. 33 ft. w. of e. line.
Farmer Garfield Virginia Georgia Carolina Maryland Connecticut Rhode Island Massachusetts North Hodge avenue Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts Canal	Hertel avenue Grace 220 ft. e. of Delaware ave. Carolina Maryland Hudson. Vermont Massachusetts.	200 40 400	XXXXXXX	39 ft.e. of w. 39 ft.e. of w. 139 ft.e. of w. 15 ft.e. of w. 15 ft.e. of w. 32 ft.e. of w. 32 ft.w. of e. 33 ft.w. of e.
Garfield. Virginia Georgia Carolina Maryland Connecticut Rhode Island Massachusetts. North Hodge avenue Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts Canal	Grace 220 ft. e. of Delaware ave. Carolina Maryland Hudson. Vermont Massachusetts.	0 40 400	KHKKK	39 ft. n. of e. 19 ft. e. of w. 32 ft. w. of e. 32 ft. w. of e. 33 ft. w. of e. 33 ft. w. of e.
Georgia Carolina Maryland Connecticut Rhode Island Massachusetts, North Hodge avenue Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts	Zzo tr. e. or Delaware ave. Carolina Maryland Hudson. Vermont Massachusetts.	40 40 0	HKKK	
Carolina Maryland Connecticut. Rhode Island Massachusetts. North Hodge avenue. Lexington Ferry Delavan avenue Clinton Main Terrace Water Water Main Massachusetts Canal	Maryland Hudson. Vermont Massachusetts. Hampshire	400	RR	
Maryland Connecticut Rhode Island Massachusetts North Hodge avenue Lexington Ferry Delavan avenue Clinton Main Terrace Water Water Main Massachusetts Canal	Hudson. Vermont Massachusetts Hampshire	999	R	22 ft w. of e.
Rhode Island Massachusetts. North Hodge avenue. Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts Canal	Vermont Massachusetts	9		200
Massachusetts. North Hodge avenue. Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Main Massachusetts Canal	Hampshire		H	21 ft. w. of e. line.
North Hodge avenue. Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts Canal	Description	0 9	11	32 It.e. of w. line,
Hodge avenue. Lexington Ferry Delavan avenue Clinton Main Terrace Water Main Massachusetts Canal	Dryant	9	H	33 ft.e. of w. line.
Ferry Delayan avenue Clinton Main Terrace Water Main Massachusetts Canal	Utica	9	H	24 ft.e. of w. l
Delavan avenue Clinton Main Terrace Water Main Main Main Main Peral	Highland	9	H	30 ft. w. of e. line,
Clinton Main Terrace Water Main Main Massachusetts Canal	Bouck avenue	9	I	30 ft. e. of w.
Main Terrace Water Main Massachusetts Canal	Delavan	0 4		32 ft. w. of e. line.
Terrace Water Main Massachusetts Canal	Terrace.	00	H	ft. n of s.
Water Main Massachusetts Canal Pearl	Water	9	R	38 ft, n. of s.
Main Massachusetts Canal Pearl	Buffalo river	7	R	
Massachusetts Canal	Pearl	10	K	ft. n. of s.
Pearl	Khode Island	9	H	roft, e. of w. line.
rear	Fly	9	K	13 ft. n. of s.
		9	H	4 ft. n. of s.
Connecticut		7	H	To ft.e. of w.
Connecticut	Hampshire	9	H	38 ft. w. of e. 1
	Niagara	9	R	38 ft, w. of e.

rargo avenue	Jersey	Porter avenue.,	H - 9	23 ft. w. of e. line.
Fargo avenue	[ersey	Pennsylvania	# i	19 ft. e. of w. line.
farmer	Niagara	Gurnsey	<u>~</u>	20 ft. n. of s. line.
Farmer	Gurnsey	Tonawanda	~	42 ft. s. of n. line.
Ferguson	Herkimer	Grant	Ξ 	32 ft. n. of s. line.
Ferry	Erie Canal	•••••••••••••••••••••••••••••••••••••••	~	26 ft. s. of n. line.
erry	Gelston		2	41 ft. s. of n. line.
'erry	West avenue	:	H 9	40 ft. s. of n. line.
erry	Main		Ξ	55 ft. n. of s. line.
lifteenth	York	Vermont	F - C	41 ft.e. of w. line.
difteenth	Vermont	Rhode Island	- H	26 ft.e. of w. line.
ifteenth	Rhode Island	Hampshire	H	40 ft.w. of e. line.
ith	Court	Pennsylvania	24	34 ft.w. of e. line.
	State		~	20 ft. s. of n. line.
orest avenue	Erie canal		~ 	22 ft. n. of s. line.
orest avenue.	Niagara	•	~	42 ft. s of n. line.
orest avenue	West avenue	:	~ ~	40 ft. s. of n. line.
orest avenue	Richmond avenue		H	40 ft. n. of s. line.
ourteenth	Wadsworth	:	エ	100 ft. e. of w. line.
ourteenth	Porter avenue	Vork	H	25 ft. e. of w. line.
ourteenth	Connecticut	130 feet southerly 8		21 ft. e. of w. line.
ourteenth	Connecticut	:::::::::::::::::::::::::::::::::::::::		24 ft.e. of w. line.
ourteenth	Rhode Island	-	_	38 ft.w. of e. line.
ourth	Genesee	430 feet northerly	*	25 ft. e. of w. line.
ourth	Carolina	300 feet southerly	~	35 ft.w. of e. line.
ourth	Georgia	300 feet n. of Maryland	64	17 ft w. of e. line.
ourth	Jersey	Pennsylvania	<u>م</u>	16 ft.e. of w. line.
ranklin	Terrace	-:		24 ft.e. of w. line
Franklin	Erie	-	X	30 ft.w. of e. line.
ranklin	Eagle	Chippewa	4 8	28 ft.w. of e. line.
Franklin	Chippewa	500 feet northerly	- R	
ranklin	500 ft. north of Chippewa	Tupper	→	26 ft.w. of e. line.
ranklin	Tupper	North	# 9	38 ft.e. of w. line.
remont place	Virginia	North	H9	30 ft. e. of w. line.
ront avenue	Massachusetts	Jersey	H 9	16 ft.e. of w. line.
ront avenue.	Porter avenue	Vermont 2	- - -	48 ft. w. of e. line.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	To	Size of Pipe, Inches.	System.	Location of Pipe.
Front avenue,	Rhode Island	216 feet s. of Connecticut.	9	щ	e.
Front avenue	Valve House	Hampshire	24	KH	70 ft. w. of e. line
Jenesee	Ferry	Bouck avenue	4.	Z	f.e.
	Pearl	Franklin	4 4	×	s. of n.
Genesee	Niagara	Franklin Fast line of C R R	99	20	31 ft. n. of s. line.
	Chippewa	Niagara	9	2	s. of n.
	Niagara	Sixth	44	2	36 ft. s. of n. line
	Court	C. R. R. Round House	0 60	22	
3lor	Military road	Austin	9	R	21 ft.e. of w. line
Gorton	Amherst	Hertel avenue	9	R	18 ft. e. of w. line
Grace	Niagara	650 feet e. of Tonawanda.	0	2:	17 ft. n. of s. line
Grant	Ferry	Arnold	0 4	==	35 If, e, of w. line
Grant	Breckenridge	Boyd	9	H	6 ft.w. of e. line
Grant	Bouck avenue	Auburn avenue	9	H	31 ft.e, of w. line
Grant	Bouck	Letchworth	9	H	21 ft.e. of w. line
Grant	Military road	Amherst	10	2;	39 ft. w of e. line
reenfield	Main	Elam place	9	E,	25 ft. n. of s. line
Grote	Bridgeman	575 feet easterly.	4	**	23 ft. n. of s. line
Ularousia.	America	Mailload	**	40	n. or s
Hamilton	Fact	Tonomonda	0 4	40	-0.0
Hamilton	Niagara	East	0.0	200	of a
Hampshire	Prospect avenue	Plemonth avenue	2	2	as fr a of a line

H 46 ft. s. of n. line. H 24 ft. s. of n. line. 24 ft. n. of s. line. R 25 ft. n. of s. line.		49 ft.w. of e. 38 ft.w. of e.	42 ft. w. of e.	18 ft. s. of n.		12 ft. n. of s.	H 12 ft. n. of s. line.	H 12 ft. s of n. line.	H 19 ft. n. of s. line.	H 22 ft. n. of s. line.	33 ft. w. of e. 8 ft. w. of e.	19 ft. w. of e.	H 44 ft. w. of e. line. H 24 ft.e. of w. line.	20 ft.e. of w.	22 ft.e. of w.	42 ft. n. of s.	42 ft. n. of s.	23 ft. n. of s.	30 ft. n. of s.	30 ft. n. of s.		п 25 п. п. от s. ппс.
0 4 4 6	o	2 7 7	. 0 .	9	9 9	6 0	en en		• •	9	4 h		• •	9	9 9	2 2	۰	44	<u>ر</u> ک	••	12	4
Thirteenth Ferry Albany Main Prime Inchest			avenue (East Tonawanda		Howard Ashland	:	Delaware 442 feet west	avenue	Hamilton SoutherlyAustin		ummer Delavan	:	Bouck avenue Forest				pect avenue Main	avenue	Niagara.	reall
Thirteen Front Main	Dewi Terra	Albany	Bouc	Niagara.	East	Rich	Ashla	Elmwood	Delay	Dela	Ham	Verm	Summer. Delavan.	Ferry	Bouc	West	Cotta	Sixth.	Franklin	Dela	Pearl	Main
Hampshire Hampshire Hanover Haulev	Helen. Henry	Herkimer	Herkimer	Hertel avenue.	Hibbard	Highland	Highland	Highland.	Highland.	Hodge avenue	Hoffman alley	Hodge street.	Howard avenue.	Hoyt	Hoyt	Hudson	Hudson	Hudson	Huron	Huron	Huron	unturion norm

Street,	From	То	Size of Pipe, Inches.	System.	Location of Pipe.
rving place	Allen	North Court place	9	H	32 ft e. of w. line
ersey	Front avenue	Porter avenue	10	HE	27 ft. s of n. line
ersey	Prospect avenue	West avenue	9 9	HI	29 ft. s. of n. line
ersey	Fourteenth	200 feet easterly	0.0	: = :	20 ft. s. of n. line
ersey	Lake View avenue	Canal	9 9	H	43 ft s. of n. line. 18 ft. s. of n. line.
ewett avenue	Crescent	Park	9	==	To ft. n. of s. lin
ohnson place	Delaware avenue	Carolina	+ 4	2	24 ft. s. of n. lin
Joslyn place	Austin Amherst	300 feet northerly	49	**	22 ft.e. of w. lin
Ketchum place	Jersey	York	9	H	35 ft. w. of e. lin
Kremlin alley	Eagle	Porter avenue	40	HZ	7 ft. w. of e. lin
Cincoln parkway	Forest avenue	South line of Park	9	K	66 ft.e. of w. lin
Linwood avenue	North	Ferry	9	H	43 ft w of e, lin
Linwood avenue	Bouck avenue	225 feet southerly	0 7		14 ft.e of w. lin
Livingston	Auburn avenue	230 feet southerly	9	H	35 ft.w. of e. lin
Lloyd	South and of bridge	South end of bridge,	44	20	26 ft e. of w. line
Logan	Bridgeman	N. Y. C. R. R.	00	424	20 ft. n of s. line
Main	Vernon	Russel	4	H	9 ft.e. of w. line
Main	Amherst	Morris		-	and to a miles

arviand	Seventh	Too feet west of Fourth	_	lanten of ell	9
proland	Ningara	<u>-</u>		1 4 6 6 9 6 7	
arvland	Cottage		4 I	30 ft s. of n. li	ine.
aryland	Niagara	Seventh.		20 ft. n. of s. li	ine.
assachusetts	Seventh	:	_	22 ft. s of n. li	line.
assachusetts	Niagara	-		14 ft. s. of n. l	line.
assachusetts	Front	:	_	50 ft. n. of s. li	ne.
assachusetts	Seventh	_		46 ft. s. of n. l	line.
assachusetts	Niagara.		•	41 ft. s. of n. li	ine.
assachusetts	Prospect avenue			40 ft. s. of n. l	ine.
assachusetts	Plymouth avenue	:	_	38 ft. s. of n. li	ne.
assachusetts	Fargo avenue	:		26 ft. n. of s. li	ne.
assachusetts	Fourteenth	Richmond avenue		26 ft. n. of s li	ine.
echanic	Terrace	:		34 ft. n. of s. l	ine.
ichigan	Balcom	:::::::::::::::::::::::::::::::::::::::	_	25 ft.e. of w. li	ine.
ichigan	Bouck avenue	:::::::::::::::::::::::::::::::::::::::		45 ft.w. of e li	ne.
ilitary road	Amherst			29 ft.w of e. li	ne.
ilitary road	Austin	:		29 ft.w. of e. li	ne.
ohawk	Main			36 ft. s. of n. li	ine.
ohawk	Niagara			24 ft. n. of s. l	ine.
organ	Chippewa	: : : : : : : : : : : : : : : : : : : :		41 ft.w. of e. li	ine.
organ	Niagara			26 ft.e. of w. li	ne.
orris	Starin	:		45 ft. s. of n. l	ine.
iagara	Main	onnecticut		61 ft. e. of w. 1	ine.
iagara	250 ft. n. of Connecticut.	:::::::::::::::::::::::::::::::::::::::	_	18 ft.w. of e. li	je.
iagara.	Connecticut	:		12 ft. e. of w. l	ine.
iagara	Massachusetts	•	9 	65 ft.e of w. l	ine.
iagara	Front avenue	:::::::::::::::::::::::::::::::::::::::		20 ft w. of e. li	ine.
iagara	Albany	Forest avenue	4 — ¤	19 ft.e. of w. l	ine.
iagara	Breckenridge	300 feet northerly	4 	19 ft.w. of e. li	line.
iagara	Bouck avenue	250 feet southerly	4 —	19 ft.w. of e. l	line.
iagara	Bouck avenue	Forest avenue	- A	19 ft w. of e. l	ine.
iagara	Forest avenue	Parish	9		line.
iagara	Amherst	Parish	9	63 ft.e of w. l	ine.
agara	Amherst	City line.	9 2	39 ft. w. of e. I	. <u>.</u>
ineteenth	Khode Island	rerry	- -	30 It. e. OI W. I	Ine.

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

	1.0	E			-0	BC									-													
Pipe,			v. line	n. line.	v. line	s. line	v. line	n. line	v. line	s. line	v. line	e. line	n. line	e. line.	e. line,	e. line	v. line	w. line	e. line	v. line	w. line	w, line	s. line	of s. line	s. line	s. line.	s. line	s. line
Location of Pipe,	s. of	n. of	of v	s. of	of 1	n of	of v	S, of	e. of a	n. of	of v	w. of	s. of	v. of	v. of	w. of	of a	e. of	w. of	of 1	e. of	o of	n, of	n. of	n. of	n. of	n. of	n. of
Locat	15 ft. s. of n.	31 ft. n. of s.	28 ft.e. c	23 ft. s. of n. l	22 ft.e	18 ft.	18 ft.e	40 ft.	31 ft.	18 ft. 1	25 ft.e	23 ft.	30 ft. s. of n.	24 ft v	40 ft.v	14 ft.	36 ft.e	29 ft.	22 ft.	26 ft.e	24 ft.	29 ft.e	24 ft. n. of s. l	24 ft.	25 ft.	25 ft. n.	12 ft.	25 ft.
System,	н	H	Н																						×	H	×	R
Size of Pipe, Inches.	4	12	9	9	9	9	9	91	9	4	9	9	9	4	9	9	*	*	4	10	12	12	9	4	9	9	5	+
Street.	Wadsworth	Porter avenue	North	Peacock	Bryant	Parkside	Pennsylvania	East	North	Johnson place	Beard	Oakwood	Norton	Terrace	Court	200 feet northerly	Genesec,	Chippewa	250 feet southerly	Niagara	Huron	Tupper	175 feet west of Fourth	150 feet easterly	Plymouth avenue	Wadsworth	250 feet westerly	DeWitt
From	Cottage	Main	Virginia	Water	Summer	Main	Hudson	Niagara	Virginia	Delaware avenue	Amherst	Jewett avenue	Erie	Commercial	Terrace	Terrace	Court	Genesee	Virginia	Terrace	Niagara	Chippewa	Niagara	Prospect avenue	West avenue	Plymouth avenue	Fifth	Herkimer
To	Norris place	North.	North Pearl	Norton	Oakland place	Oakwood	Orton place	Parish	Park	Park place	Parker avenue	Parkside avenue	Peacock	Pearl	Pearl	Pearl	Pearl	Pearl	Pearl place	Pearl	Pearl	Pearl	Pennsylvania	Pennsylvania	Pennsylvania	Pennsylvania	Pennsylvania	Perkins place

25 ft. e. of w.	H 41 ft. w. of e. line.	25 ft. e. of w.	43 ft. w. of e.	25 ft. w. of e.	16 ft. n. of s.	21 ft. n. of s.	22 ft. n. of s.	5 0	ft. n of s.	ft. n of s	ft. s. of n	H 71 ft. n. of s. line.	H 30 ft n. of s. line.	H 35 ft. w. of e. line.	R 20 ft.e. of w. line.	R 18 ft. w. of e. line.	R 38 ft.e. of w. line.	H 25 ft. w. of e. line.	R 12 ft. w. of e line.	H 12 ft.e. of w. line.	H 17 ft.w. of e. line.	H 42 ft.w of e. line.	R 42 ft. w. of e. line.	R 25 ft. s. of n. line.	H 13 ft s. of n. line.	40 ft. s. of n.	H 25 ft. n. of s. line.	16 ft e of w.	18 ft. w. of e.	H loft. w. of e. line.	H 16 ft. w. of e. line.	R 41 ft. e. of w. line.	H 39 ft. s of n line.	R 27 ft. n. of s. line.
9 4	9	9	9	9	4	4	9	4	9	54	7	12	2	9	7	30	9	9	7	20	4	9	9	9	4	•	•	9	9	4	•	9	4	2
Jersey	Connecticut	Massachusetts	Hampshire	School	Grant	200 feet west of Fourth	Seventh	Prospect avenue	West avenue	Fourteenth	West avenue	The Circle	Fourteenth	Boyd	Hanover	Huron	Hudson	Porter avenue	Vermont	Connecticut	Vermont	Hampshire	Niagara	Niagara	Fourteenth	Niagara	Richmond avenue	Forest avenue	Summer	Butler	. Anderson place	Peacock slip.	Franklin.	Terrace
Hudson	Connecticut	Rhode Island	Massachusetts	Hampshire	DeWitt	Sixth	Sixth	Seventh	Prospect avenue	West avenue	Prospect avenue	Fourteenth	Jersey	Ferry	Main	Massachusetts	Huron	Hudson in spirit	Porter avenue	Porter avenue	Connecticut	Vermont	Hampshire	West avenue	Jersey	Sixth	Prospect avenue	Jersey	Circle	Ferry	Butler	Erie	Main	Main
	Plymouth avenue		Plymouth avenue	Plymouth avenue	Pooley place	Porter avenue	Porter avenue	Porter avenue	Porter avenue	Porter avenue	Porter avenue	Porter avenue	Porter avenue	Preston	Prime	Prospect avenue	Prospect avenue	Prospect avenue	Prospect avenue	Prospect avenue	Prospect avenue	Prospect avenue	Prospect avenue	Penfield	Public alley	Rhode Island	Rhode Island	Richmond avenue	Richmond avenue, east side.	Richmond avenue, east side.	Richmond avenue, east side.	River	Seneca	Seneca

Schedule of Water Pipe laid in the City, giving Location, Size of Pipe, and on what System.

Street.	From	To.	Size of Pipe, Inches,	System.	Location of Pipe,
Seneca	Main	100 feet westerly	9	R	50 ft. n. of s. line.
School	Fargo avenue.	Prospect avenue	99	HH	40 ft. n. of s. line.
Seventeenth	Vermont	Connecticut	00	H	22 ft.e. of w. line.
Seventh Seventh	Kichmond avenue	Moseachusette	9 4	Ho	24 ft.e. of w. line,
Seventh	Wilkeson	Georgia	30	4 24	33 ft. e of w. line.
Seventh	Georgia	Porter avenue	9	R	40 ft.w. of e. line.
Seventh	Porter avenue	Vermont	4	H	26 ft.e. of w. li
Seventh	Vermont	Khode Island	3	H	12 ft. e. of w. li
Seventh	Phode Island	Massachusetts	30	*	24 ft.e. of w. li
Seventh	Massachusetts,	Front avenue	122	Cox	33 It.w. of e. line.
Seventh	Store-house	Court,	141	R	21 ft e. of w. li
Sherwood	Hampshire	Arkansas	9	H	20 ft.e. of w. line.
Shields avenue	Massachusetts	Utica	9	H	23 ft.e, of w. line.
xixteenth	York	Vermont	9	H	40 ft.w. of e. line.
Sixteenth	Massachusetts.	Hampshire	9	H	20 ft.e. of w. li
Front avenue	Court	Darter august	00	*	24 ft.w. of e. line.
State	Canal	Water	20	42	21 ft. e. of w. line.
St. John's place	Wadsworth	225 feet westerly	4	H	32 ft. s. of n. li
. John's place	Orton place,	325 feet easterly	4	H	47 ft. n. of s. line.
Starin	Amherst	Wood	9	H	47 ft. s. of n. li
Summer.	Main	Howard avenue	9	H	44 ft. n of s. line.
Summit amount	noward avenue	Kichmond avenue	9	I :	oft, n of s. line
Summit avenue	ewett	Oakwood	9	H	33 ft. w. of e. line.
Same	Visio	P			

Swan	Pearl	Franklin	_	25 ft s. of n. line.
Tenth	Carolina	Hudson		25 ft. w. of e. line.
Terrace, lower	Court	Seneca 20		61 ft. e. of w. line.
Terrace, lower	Court			26 ft. e. of w. line.
Terrace, upper	Seneca	Main 24	_	
Terrace, upper	Pearl	:::::::::::::::::::::::::::::::::::::::		27 ft. s. of n. line.
	Eagle			13 ft.w. of e. line.
Terrace, upper	Court	275 feet southerly		11 ft. w. of e. line.
Terrace	Franklin	:	_	runs acr's Terrace.
Thirteenth	Pennsylvania	Jersey 6		38 ft.w. of e. line.
Thirteenth	York	:		13 ft.e. of w. line.
Thirteenth	York	Rhode Island		44 ft.w. of e. line.
Thirteenth	Rhode Island	Massachusetts		44 ft w. of e. line.
Thirteenth	Massachusetts	:		37 ft. w. of e. line.
Thompson	Amherst	Farmer	_	20 ft. e. of w. line.
Tonawanda	Amherst	Niagara 10		22 ft w of e. line.
Tonawanda	Hertel			24 ft.w. of e. line.
Tonawanda	Farmer	:	_	to ft.w. of e. line.
Tonawanda	Farmer	Hertel	_	40 ft.w. of e. line.
Tracy	Delaware avenue	:::::::::::::::::::::::::::::::::::::::	-	16 ft. n. of s. line.
Tryon place	Bouck avenue	:	_	15 ft.e. of w. line.
Tupper			_	21 ft. s. of n. line.
Tupper	e avenue	sterly		33 ft. s. of n. line.
Twelfth		:		28 ft. w. of e. line.
Union place		:		28 ft.e. of w. line.
Utica	Main	•		28 ft. n. of s. line.
Utica	Linwood avenue	Delaware avenue	= ;	27 ft. n. of s. line.
Utica	Delaware avenue	160 feet west of Elmwood.	Ξ:	19 ft. n. of s. line.
Utica	Elmwood avenue	Ashland avenue	H :	II ft. s. of n. line.
Utica	Elmwood avenue	125 feet westerly	H :	14 ft. s of n. line.
Utica	Richmond avenue	Chenango (H ;	20 ft. n. of s. line.
Utica	Richmond avenue	200 feet easterly	= :	II ft. s. of n. line.
Utica	Chenango	Eighteenth	H ;	37 ft. s. of n. line.
Utica	Eighteenth	Shields avenue	Ξ:	40 ft. n. of s. line.
Utica	Shields avenue	Massachusetts	<u> </u>	It is of n. line.
Vermont	Kichmond avenue	west avenue	= -	27 it. n. 01 s. inc.

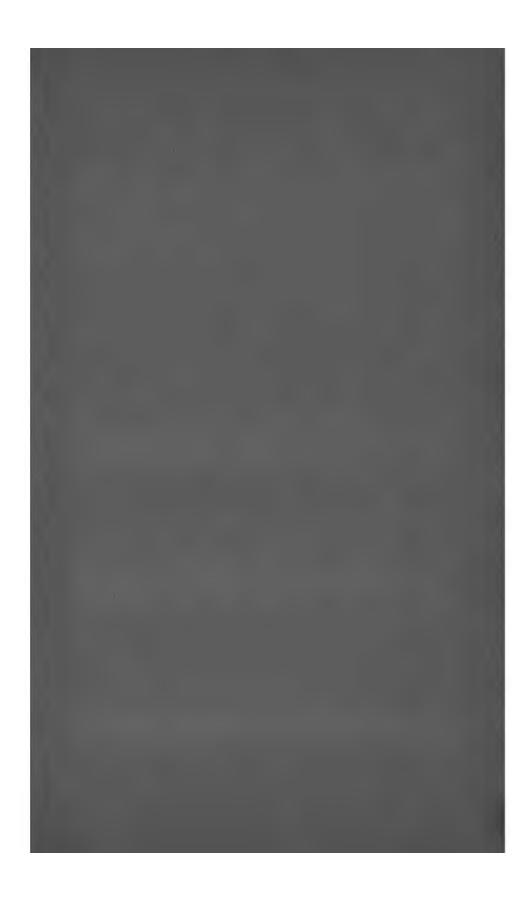
Vermont West avenue Seventh Vermont Prospect avenue Seventh Vermont Seventh Front avenue Vermont Seventh Seventh Vermont Niagara Seventh Vermont Niagara Seventh Vermont Cottage Franklin Virginia Franklin Mest avenue Virginia Prospect avenue Seventh Virginia Prospect avenue Seventh Virginia Fifth Prospect avenue Virginia Fifth Prospect avenue Virginia Fifth Prospect avenue Virginia Prospect avenue Nadsworth park Virginia Prospect avenue Nadsworth park Virginia Prospect avenue Virginia West avenue Porter avenue Virginia Vest avenue Porter avenue Virginia Vest avenue Porter avenue Virginia Vest avenue Porter avenue Virginia	From	Size of Pipe, Inches.	System.	Location of Pipe.
Prospect avenue Seventh Seventh Niagara Niagara Cottage Cottage Cottage Cottage Cottage Cottage Cottage Franklin Tupper West avenue Fourth Fifth Fifth Fifth Fifth Fifth Fifth Fifth Fifth Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Fremout	ne	91	H	of n
Seventh Niagara Niagara Niagara Cottage Cottage Cottage Cottage Franklin Tupper West avenue Prospect avenue Prospect avenue Fifth Fourth Ferry Connecticut Connecticut Albany Breckenridge Ferrora avenue Connecticut Ferry Vermont	avenue	24	20	of S.
Niagara. Niagara Cottage Cottage Cottage Cottage Franklin Tupper West avenue Prospect avenue Seventh Fifth Fourth Fifth Fifth Fifth Fifth Fifth Fifth Fifth Fifth Fifth Fourth Fourth College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Fremont		0 5	Z	52 ft. s. of n. line.
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Cottage Franklin Tupper West avenue Prospect avenue Seventh Fifth Fifth Fifth Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Fronter avenue Connecticut Albany Wermont		9	Ξ:	of n.
Tupper West avenue Prospect avenue Seventh Fith Fith Fith Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Frommercial Ferry Ferry Ferry Anthermont		10	CI	25 ft. n. of s. line.
West avenue Prospect avenue Seventh Fourth Fifth Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Fremanne		30	K	of s.
Prospect avenue. Seventh Fourth Fifth Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Albany Breckenridge Fressente	ne I	9	R	of s
Seventh Fourth Fifth Allen College Commercial Ferry Carolina Virginia Porter avenue Connecticut Abbany Breckenridge Ferror Connecticut Abbany Breckenridge Vermont	t avenue S	9	R	of n.
Fourth Fifth Allen College Commercial Ferry Carolina Virginia Virginia Porter avenue Connecticut Abany Breckenridge Ferror Connecticut Abany Vermont	3	9	R	of s.
Allen College Commercial Ferry Carolina Virginia Virginia Porter avenue Connecticut Albany Breckenridge Ferrorear avenue Connecticut Albany Vermont	***************************************	9	K	of n.
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th place College Commercial nue Carolina nue Virginia nue Porter avenue Connecticut Albany nue Breckenridge nue Forest avenue Connecticut Albany nue Vernent		7	I	of s.
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avenue Virginia avenue Porter avenue Connecticut avenue Albany Breckenridge Breckenridge Vermont		9	R	of e.
avenue Porter avenue Connecticut Albany Breckeridge Breckeridge Vernont Vernont	T	20	R	f w.
Avenue Porter avenue Connecticut Albany Breckenridge Forest avenue Vermont	,	*	H	of e
Avenue Connecticut Albany Breckenridge Forest avenue Vermont)	9	H	of e.
Albany Breckenridge Forest avenue Vermont		91	H	f w.
Avenue Porest avenue Vermont		9	×	f w.
Yernon Vermont Hammen	1	91	×	24 ft.e. of w. line,
Vernue	180 feet	9	N	ft.w. of e. 1
The state of the s	***************************************	9	Ξ	ft. e. of w. 1

R 28 ft.e. of w. line. H 27 ft. n. of s line.	R 24 ft. w. of e. line. R 37 ft e. of w. line	R 25 ft. s of n. line. R 40 ft. n. of s. line.	R 27 ft. s. of n. line. H 25 ft.e. of w. line.	H 35 ft. s. of n. line. H 43 ft. s. of n. line.
9 9	40	0 4	40	9 9
Hampshire Albany Richmond avenue. York	Georgia Carolina Hudson	CourtSixth	Mohawk Hampshire	ParkerRichmond aver
Hampshire	Georgia Carolina	Court	Seventh	Starin West avenue
West avenue	::	•		Wood York

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